VOL. 73 NO. 1

textile bulletin

SEPTEMBER • 1 • 1947

Does modern production machinery reduce employment? American industrial history offers facts that should settle this question. See "History Says 'NO'," Page 15.

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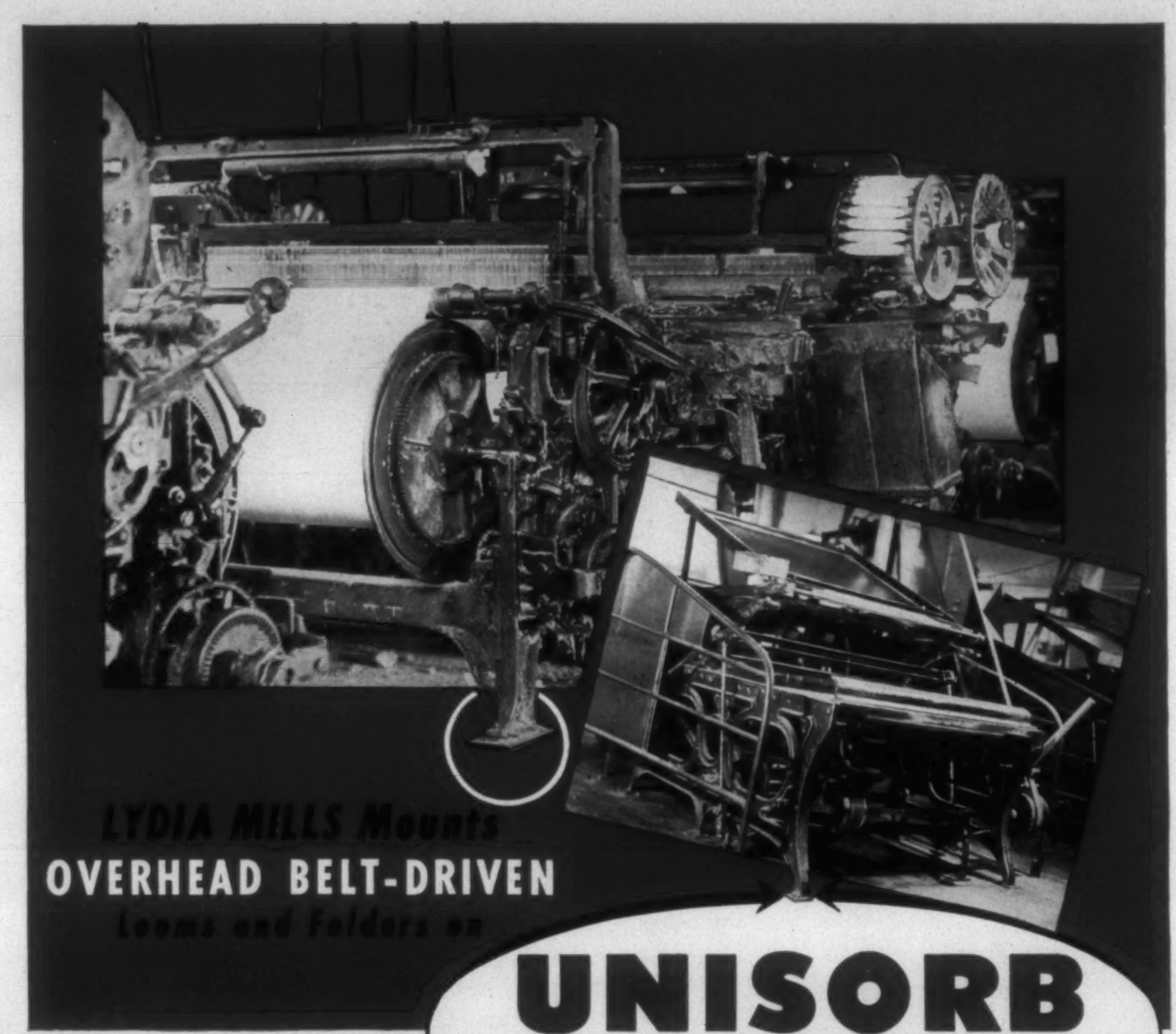

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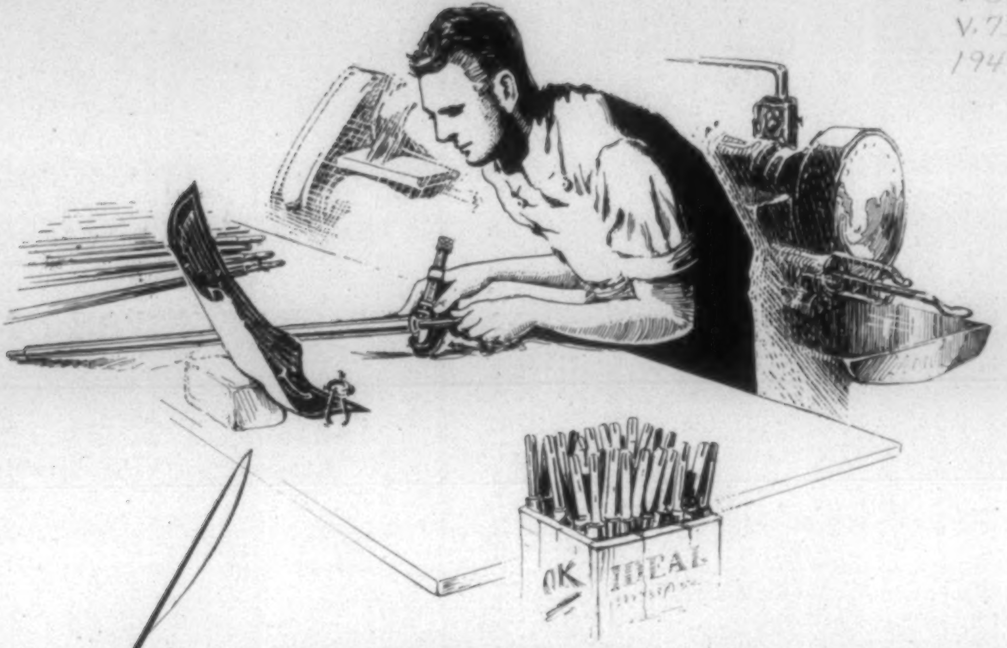
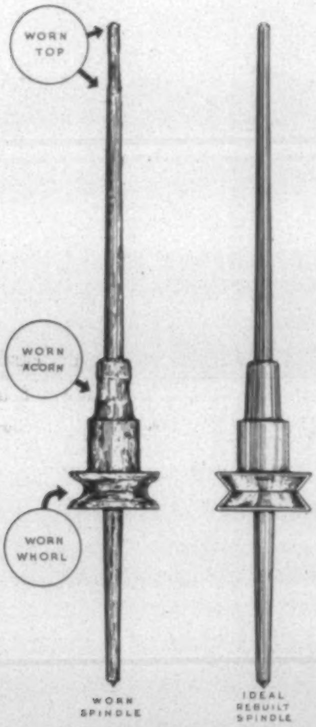


About PROFESSIONAL STANDARDS...



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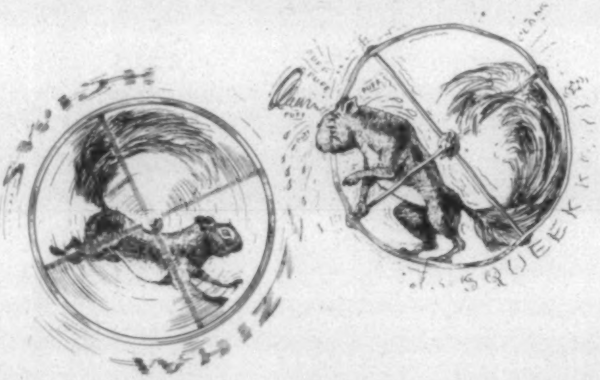

Why is one exhausted . . . AND THE OTHER GOING STRONG?

It's just another example of the importance of perfect balance. The balanced cage spins easily with almost no effort . . . the vibration set up when the unbalanced cage starts slows it down and quickly exhausts its user.

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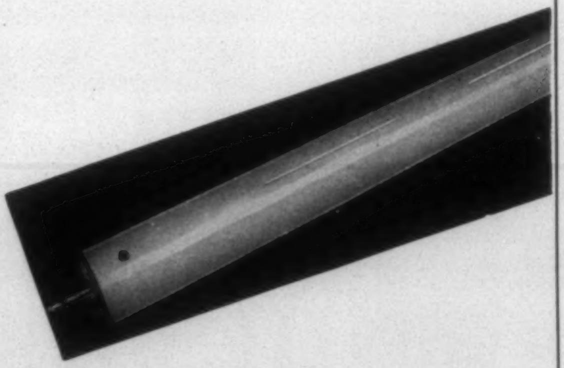

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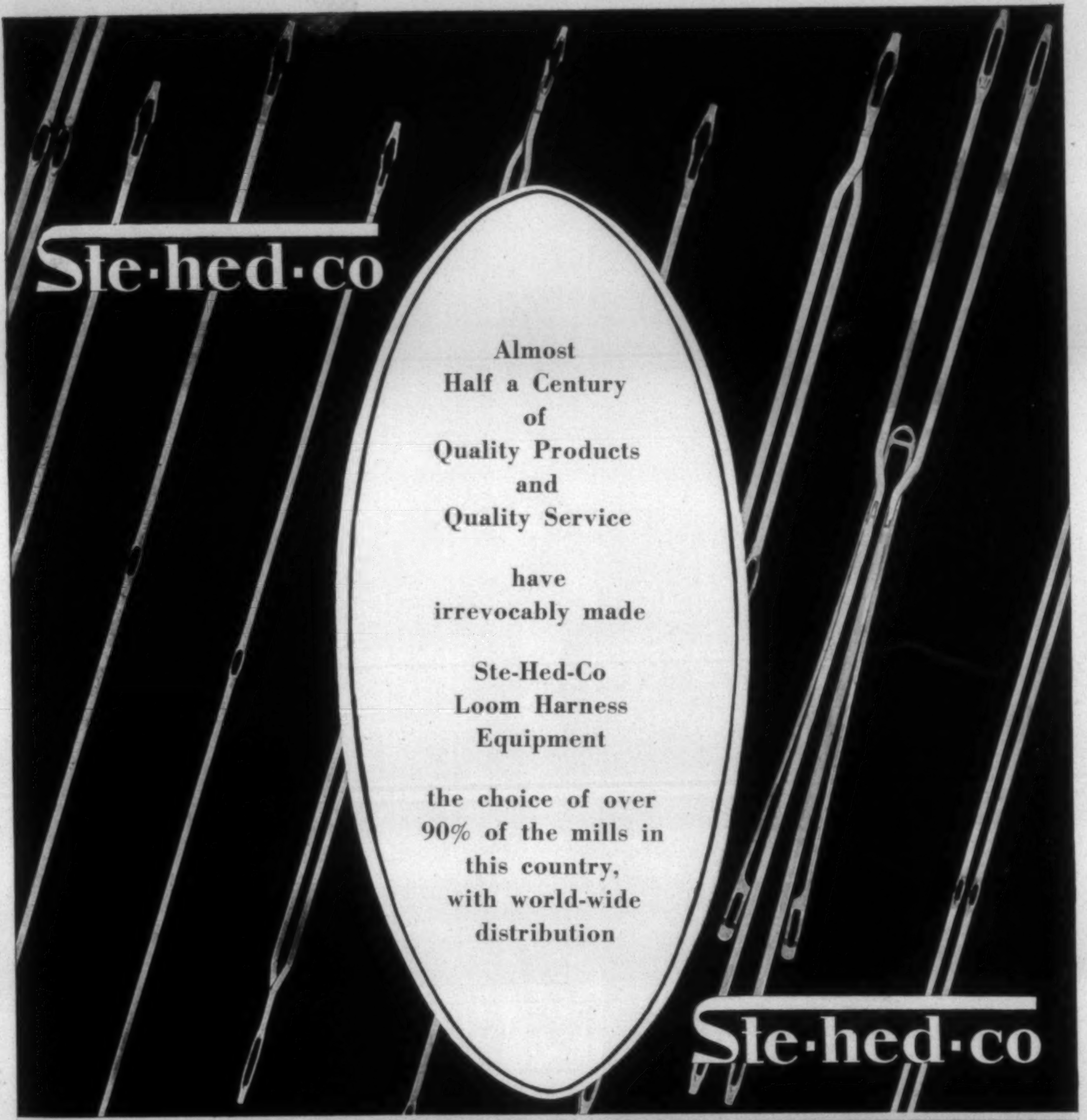

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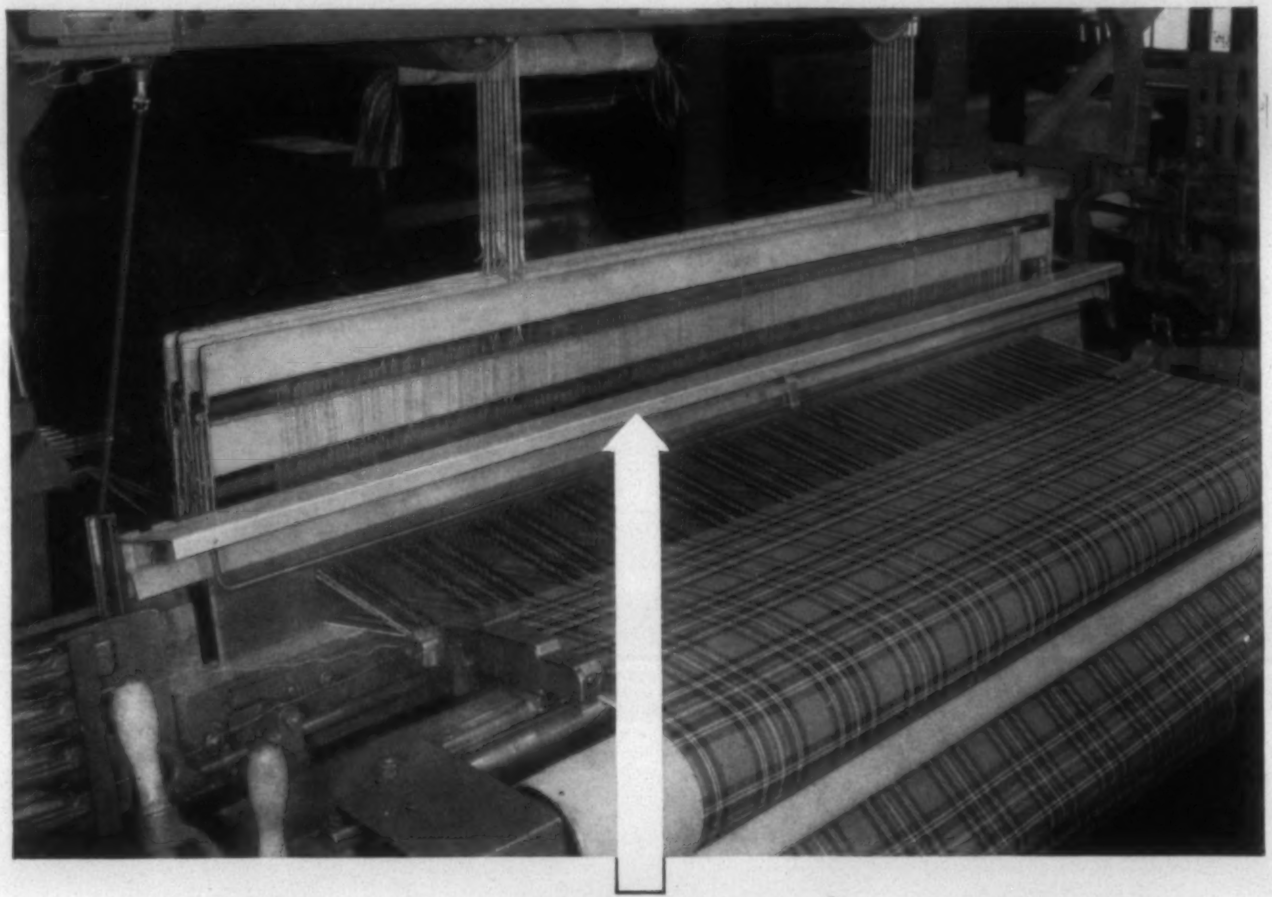

. . . in these new HANDRAILS for C&K Looms

Extruded Magnesium Handrails have no distortion from humidity in the weave-room.

Extruded Magnesium Handrails have a cross-section as strong as wood with far less bulk and weight.

Extruded Magnesium Handrails show far less deflection than wood . . . give evidence of lasting longer on the loom.

Extruded Magnesium Handrails would seem to help to hold down both the selling price and the operating cost of looms.

That's "why magnesium"! And that is why C&K feels that actual tests now under way in several mills will show that this new idea in handrails (as all new ideas *must*) will answer *yes* to one or more of C&K's 6 Sentries:

1. Does it increase Speed of Loom Operation?
2. Does it increase Ease of Loom Operation?
3. Does it improve Quality of Fabric?
4. Does it decrease Cost of Maintenance?
5. Does it improve Continuity of Operation?
6. Does it improve Appearance and Utility?

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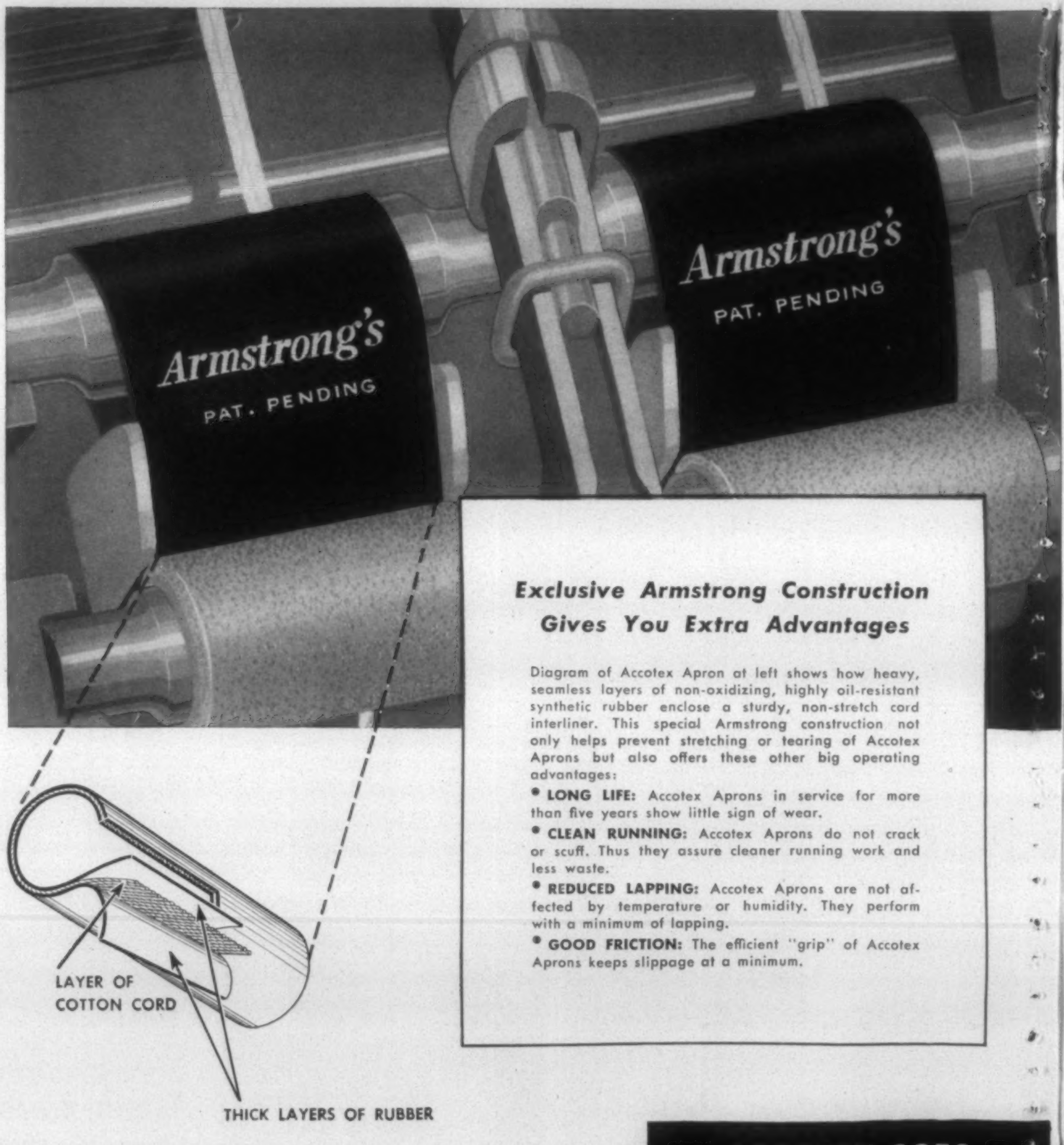

Exclusive Armstrong Construction Gives You Extra Advantages

Diagram of Accotex Apron at left shows how heavy, seamless layers of non-oxidizing, highly oil-resistant synthetic rubber enclose a sturdy, non-stretch cord interliner. This special Armstrong construction not only helps prevent stretching or tearing of Accotex Aprons but also offers these other big operating advantages:

- **LONG LIFE:** Accotex Aprons in service for more than five years show little sign of wear.
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- **REDUCED LAPPING:** Accotex Aprons are not affected by temperature or humidity. They perform with a minimum of lapping.
- **GOOD FRICTION:** The efficient "grip" of Accotex Aprons keeps slippage at a minimum.

ACCOTEX COTS
CORK COTS

BETTER PRODUCTION

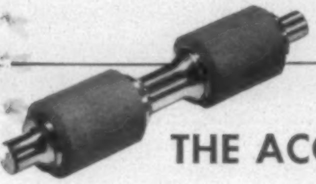
wearing ACCOTEX APRONS

Accotex Long Draft Aprons help keep production rolling because they wear uniformly. Every Accotex Apron is made of a tough synthetic rubber compound that is controlled during manufacture to eliminate the variations normal in a natural product. Thus when you run on Armstrong's Accotex Aprons, apron replacement normally need be done only at regular overhauling periods.

Controlled uniformity also provides better drafting, better fiber control. Throughout their long life, you can count on dependable, uniform service from Accotex Aprons.

To provide added assurance that Accotex Aprons will not tear, break open, or stretch, Armstrong developed a special construction that uses heavy seamless layers of synthetic rubber to enclose a strong, non-stretch cord interliner.

Install Armstrong's Accotex Aprons on a test frame in your mill. See how these superior aprons step up yarn quality and increase poundage. Ask your Armstrong representative for samples, prices. Or write today to Armstrong Cork Co., Textile Products Dept., 8209 Arch Street, Lancaster, Pa.



THE ACCOTEX COT . . . by the makers of Accotex Aprons

The most widely used textile roll coverings, Accotex Cots are the result of the same specialized research and technical skill that produced the Accotex Apron. Here are eight reasons why Accotex Cots spin higher quality yarn and increase poundage.

1. **LONG SERVICE**—Accotex Cots are tough. And they can be rebuffed 5 or 6 times.
2. **GOOD DRAFTING**—Accotex Cots retain their excellent grip, because their cork-and-synthetic compositions resist slicking.
3. **REDUCED EYEBROWING**—The resistance of cork-and-rubber to slicking minimizes eyebrowing.
4. **REDUCED LAPPING**—Accotex Cots have no affinity for textile fibers and are not affected by temperature or humidity.
5. **GOOD START-UP**—Accotex Cots are non-thermoplastic, resist flattening.
6. **SOLVENT RESISTANCE**—Accotex Cots are not affected by oil, water, dyes, or any of the commonly used textile solvents.
7. **SEAMLESS CONSTRUCTION**—Accotex Cots have no seams—no structural weakness to cause premature failure.
8. **QUICK ASSEMBLY**—Accotex Cots are ready glued for easier, quicker assembly.

ARMSTRONG'S ACCOTEX APRONS

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Card Bearings lubricated with NON-FLUID OIL are protected from wear by the "built in" adhesive properties of NON-FLUID OIL that prevent it from dripping and leaking. Doffer and Top Flats stay in adjustment, assuring clean, uniform sliver.

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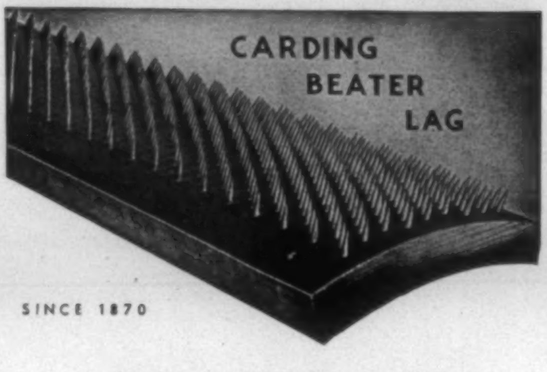

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It means that you can speed your production by making use of all the knowledge we have gained on needle-pointed specialties for the preparation of wool and other fibers. In all the field—no plant like this—no such rich fund of experience—no such quality. Your inquiries will receive prompt attention.

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MODEL A.V.T.
20,000 R.P.M.

This is NOT a grinder, but the original Pneumatic tool especially designed for the SPECIFIC purpose of

REMOVING LINT and FLY

from the top rolls and other parts of the drafting elements on

SPINNING FRAMES also ROVING FRAMES

Spindle design permits using PICK (which gathers the fly and lint) 3/16" diameter by 5" long when used on Spinning Frames and 3/16" diameter by 7" long when used on Roving Frames. Exhaust air directed back of roll picker to prevent fly and lint from being blown into yarn when spinning—PATENT APPLIED FOR. Steel housing for safety; special grease-sealed bearings. No lubrication required.

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Testing The Supervisor

THINGS didn't go so well at home this morning. The alarm failed to go off and you didn't get to read the morning paper before breakfast as usual. When you were called to the breakfast table you discovered the wife failed to get coffee yesterday, so you will have to do without it. You went out to the garage to get the car to go to work and found the right front tire flat as a pancake. You lost 15 minutes more putting on the extra. Then, in trying to make up for lost time you stepped on it a bit and the traffic cop called you down and gave you a nice bawling out for trying to make a speedway out of main street. When you did finally arrive at the plant ten minutes late you were fit to be tied.

How is it going to affect your work today? Are you a good enough supervisor to leave all your little worries at the entrance gate, or will you carry them inside with you and have those working under you scared to breathe when you come around and say one to the other, "Better steer clear of the boss today; he's in foul humor."

In our opinion, no man can be a real supervisor and leader of men when those who work for him have to find out what kind of humor he is in before they approach him with problems that need his attention. The best way in the world to lose the confidence and respect of those under your supervision is to snap at them a couple of times, regardless of how you may feel physically or how many problems you may have at the moment. Tell a man about twice that you are busy and haven't time to explain to him and anyway he should have sense enough to figure out something for himself and the next time he will do just that. The result? Possibly an accident that involves personal injury or the spoilage of materials or equipment.

Yes, if you are the type of supervisor the men have to find out what kind of humor you are in so they will know whether or not to approach you, we suggest in all fairness to yourself, the company and those working under you that you look for other employment — possibly a job watching an abandoned quarry where you can scowl and cuss all you want to.—*Safety Bulletin,* North Carolina Industrial Commission.

Truth Can Defend U. S.

THE way to get rid of a bad law, it has long been said, is to enforce it. Likewise one way to endanger a good idea is to make a mess of its execution.

International ignorance about the United States, we have belatedly realized, is phenomenal. Worse than that, falsehoods about our country are industriously circulated. That "something ought to be done" has been pretty generally agreed.

The President assigned funds to the State Department, which seemed the logical agency to do something, and William Benton, a successful former advertising man, now an assistant secretary of state, was told to do it. Perhaps some of his work was well done. Nevertheless, the radio "Voice of America" has received sharp criticism. The traveling art exhibit, made up of such stupid pictures as one of a circus fat lady, provoked ridicule. Certainly it did not tell foreigners what American really is like. Congress has come near to cutting off all funds for the purpose because a good idea was badly carried out.

Americans dare not forget that the U. S. is now the only rich and free spot in a perilous totalitarian world. Nor that exceedingly few people elsewhere have any true conception of freedom. They do not know how good it is. They do not know that America's productiveness is the result of freedom.

Russia, whose acts can only be understood to aim at world conquest by ideas or force, or both, persists in telling outrageous lies about the United States. Russian propaganda misrepresents facts, distorts motives, and challenges any inclination to believe in the good faith of this country. We are reported to be imperialists bent on enslaving and exploiting the rest of the world.

A friend lately back from Europe told of seeing canned goods with Russian labels being passed to hungry Italians as bounty from Russia. But on the bottoms in the tin were the initials "U. S. A." This was U. N. R. R. A. or other food from America on which the Russians had managed to lay hands before it reached those who needed it.

General Eisenhower told a House committee that Russian army officers bragged about the quality and performance of their Russian-made jeeps. Their government has not let them know that these were Lend-Lease jeeps from America.

The chances for a war against the United States are greater when people overseas believe only evil or error about this country.

Correct information about America can defend our peace on one of the front lines. Plenty of foreigners display great eagerness to know more about the U. S. Observers report that wherever the "American Libraries" have been opened, people wait in line for a chance to enter and read.

The true story of the U. S. can not be told abroad without telling some of the story of freedom. The facts about freedom supply a powerful antidote to the promises of communism.

Freedom has proved its case. Free people can produce enough to eat, wear and enjoy. We know that.

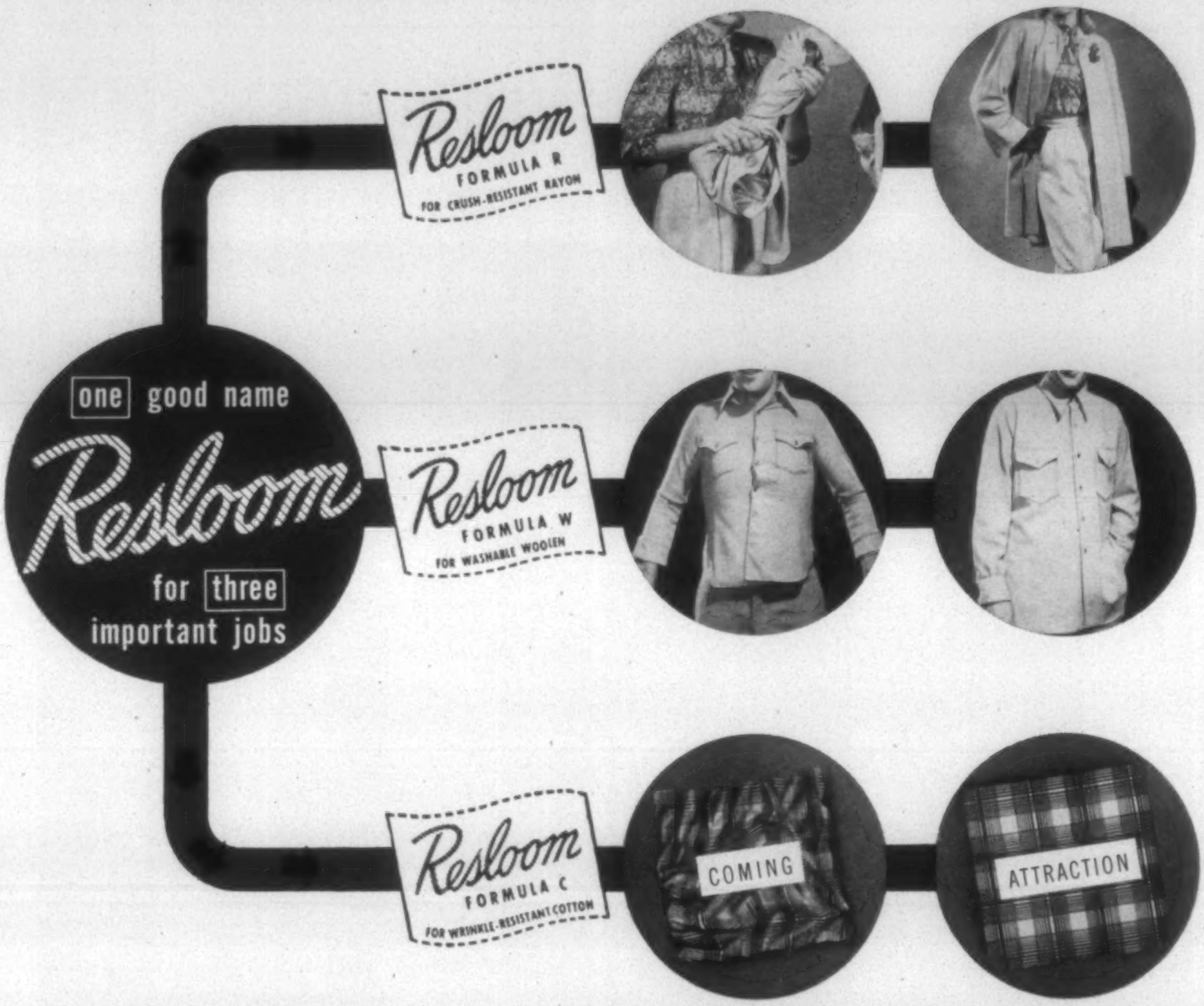
Communism has not yet proved that it can do more than to distribute poverty.

Why should not freedom be "sold" to people everywhere just as aggressively as communism, a much inferior product, is being sold?

Objection has been made that if our government promotes an educational program abroad it will engage in "propaganda." So what? If propaganda is a weapon for self-defense, let's use it! Our propaganda needs to be only the truth.

When the world-wide issues are freedom versus tyranny, productivity versus conquest, plenty versus poverty —when our freedom and our own plenty are at stake—common sense demands that America tell its story in every practicable form. Could we afford not to tell it?

Common sense also requires that when money is so spent, it be handled efficiently. — *Pathfinder News Magazine.*



Ever name triplets?

Monsanto had to recently . . . and it wasn't easy. You see, Monsanto's unique new textile chemical, Resloom . . . introduced first to make *rayons crush-resistant* . . . now has a wonderful, new "sister" application: *making woolens washable.* And soon to be offered are equally remarkable improvements for cottons. In brief, Resloom is the *basic* product; there are three variations in formula to do three different jobs.

The question arose: Should there be one name for all three of these applications . . . or three names, one each for each special function? There were good arguments for either choice.

Monsanto decided it would be less confusing and less burdensome to the trade to have one name, Resloom, already well-known. *BUT with this important variation:* the different formulation for each application was given an individual sub-title. Thus, Monsanto now has:

1 **RESLOOM**—Formula R for Crush-Resistant Rayon
2 **RESLOOM**—Formula W for Washable Woolen
3 **RESLOOM**—Formula C for Wrinkle-Resistant Cotton

Resloom, therefore, will mean generally . . . *lasting character and greater performance* to wool, cotton, rayon. And it will mean special properties for each major type of fiber, as indicated. Obviously, in blended fabrics Resloom will improve every part.

Monsanto is certain that this simplifying decision will work out to the greatest advantage for all concerned. You are invited to investigate any or all of these Resloom formulations for *your* products. Monsanto has an ambitious program of promotion for the months ahead . . . take advantage of it by taking advantage of Resloom . . . for crush-resistant rayons, washable woolens, wrinkle-resistant cottons. Address:
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SERVING INDUSTRY . . . WHICH SERVES MANKIND

ABP textile bulletin ABC

VOL. 73 *SEPTEMBER 1, 1947* *NO. 1*

HISTORY SAYS "*No*"

By HARRY E. CONRAD, Executive Secretary, American Society of Tool Engineers

UNEMPLOYMENT as a result of the mechanization of industry has been the subject of endless debate, although history has, time and again, offered conclusive evidence in support of the negative. But with each new development in labor-saving tools and machines and concurrent with each period of depression and unemployment, regardless of cause, the affirmative group reopens the debate with new vigor.

The debate began in England in 1770, in which year modern industry may be said to have been born. The symbol was the introduction of Hargreave's spinning jenny—a device in which was incorporated the capacities of eight spinning wheels, enabling one person to do the work that formerly required eight. Spinning machinery was later improved until it was able to turn out several hundred times the production possible with the hand machines. The debate took the form of violence in an effort to prevent the adoption and use of the new machines, and thus force the continuation of the slow, laborious production of cloth by hand weaving.

Twenty years later the foundation was laid for the extension of modern industry to this country when 22-year-old Samuel Slater built the first American Arkwright-type cotton spinning machine and established his claim to the title of "Father of American Manufacturing." Slater's Rhode Island factory, employing 14 persons, was the beginning; today America has thousands of manufacturing plants throughout the country, offering employment to approximately 14,000,000 men and women. And although America's productive ability has raised its living standards to the highest of any nation on earth, although this same productive ability enabled us to win the greatest war of all time, the debate continues.

Slater's spinning machine was put into operation in 1790; in the years that followed American mechanics, engineers, inventors and scientists set the stage for the rapid expansion of industry, not only by means of the new machines that they developed for performing all manner of tasks, but also through the development of tools by which the machines could be produced in the quantities and to the qualities necessary to large-scale manufacturing operations.

Among the inventors was Eli Whitney, best known as the inventor of the cotton gin, who advanced the principle of interchangeable parts and applied it to the manufacture of firearms. He also developed the milling machine and established techniques for the design and manufacture of jigs, fixtures and gauges; thus he can rightfully be called America's first tool engineer.

Without the benefits of labor-saving machines and those jigs, fixtures and gauges America would still be in the "dark ages" industrially; the manufacturing costs of automobiles, typewriters, mechanical washing machines and other living accessories would be so high as to put them beyond the reach of the masses, yet the debate has arisen again and again—upon occasion so forcibly as to result in violence on the part of those who feared that labor-saving machines would deprive them of their means of livelihood or otherwise introduce unwelcome changes in their ways of life.

Parisian quill penmen rioted when printing machines were first introduced; English textile workers destroyed the machines when the first spinning and weaving mills were put into operation; Philadelphians held public demonstrations to express their opposition to steam locomotives and railways.

It is true that in many cases the fears of the workmen as individuals were valid. The introduction of labor-saving machinery has in many cases caused at least temporary unemployment and in some cases has been the cause of severe individual hardships—hardships which must be chalked up as a part of the price the world must pay for progress. But in the long run society has benefited immeasurably, and in most cases those same workers were absorbed into the better jobs thus created.

The carriage manufacturing business was practically ruined by the development of the automobile, yet for every person who owned a horse and carriage 50 years ago, hundreds now own automobiles, and for every carriage maker who was thrown out of a job, hundreds are now employed in the automobile factories, parts factories, and service stations. The development of spinning and weaving machines released many hand spinners and weavers from their jobs, but the reduction in the cost of textiles, due to the machines, brought about an increase in sales to such an extent that the number of workers in the textile mills was trebled while the population was doubling. The invention of the typesetting machine temporarily displaced many hand typesetters, yet the number of persons employed in the printing trades is more than three times as many as were employed 50 years ago.

That story is the story of every industry in which labor-saving machinery is developed. The machine multiplies production, manufacturing costs go down, sales multiply due to the reduced costs, and employment is multiplied as a result of the increased demand. In addition a vast amount of drudgery is eliminated, wages are increased, and more goods, conveniences and accessories are made available to the public at large—all of which contributes to a higher standard of living.

A comparison of population trends with the number of men and women gainfully employed shows that in the period from 1870 to 1930—the 60 years in which machinery and technological improvements were introduced most rapidly—the increase in number of workers in America was much greater than the percentage of gain in total population. From a total of 39,818,000 in 1870, the country grew to 122,775,000 in 1930—an increase of 218 per cent. In that same period the percentage of population gainfully employed rose from 32.4 to 39.8. Today 422 out of every 1,000 persons are employed at regular jobs.

This increase has been accompanied by a marked shift of labor from one group of occupations to another. As machines have so increased the productivity per worker in certain industries as to curtail greatly the labor force required, other machines have made possible the creation of new types of manufacturing which have not only absorbed the displaced workers from the previously mechanized industries, but have provided jobs for additional numbers of the employable population.

Beginning shortly after the Civil War this shift in employment was most noticeable in the trend of workers from agricultural pursuits and into the mechanical and manufacturing industries. In the period between 1870 and 1930, during which the number of gainfully employed showed a much greater percentage of increase than the total population, there was great movement from one general classification to another.

In 1870 approximately 7,000,000 of 12,297,000 employed were engaged in agriculture, while in 1930 only 10,772,000, or approximately one-fifth of the total workers, were found on farms. The mechanical and manufacturing industries claimed about one-fifth of the workmen of the '70s, but in 1930 accounted for the employment of nearly 30 per cent of the country's $48,830,000 workers. At the same time employment in the groups which grew up in support of, or as a result of, the expansion of manufacturing gained rapidly. In transportation and trade the increase was almost three-fold, rising from approximately ten per cent in 1870 to more than 28 per cent in 1930.

More specifically, a check of employment by occupations during the period of 1920-30 reveals that 19 expanding fields of work provided employment for three new workers for each one that was lost from a similar group of shrinking industries. The decreasing occupations, characterized by high-cost hand processes, lost 807,000 workers while 2,264,548 were being added to the payroll of the expanding groups.

Jobs developed for 687,000 new truck drivers and chauffeurs and 356,512 new mechanics while 309,000 teamsters and draymen and 12,319 stable hands were being dropped from the payrolls. While no one is likely to contend that the conversion was direct, and while probably very few of the teamsters actually became truck drivers, it is apparent from these figures that during this period the machine provided almost three jobs for each one that is eliminated.

Duplex flat stainless steel heddles got the bird recently at the Gainsville, Ga., plant of Pacolet Mfg. Co. So intrigued was a pigeon family with these Steel Heddle Mfg. Co. products that discarded heddles were picked off a scrap heap, resulting in the nest pictured above. The pigeons built their modern home on a window sill of the Pacolet weave shed, then hatched out a brood of youngsters.

New Occupations

Today there are some 20,000 occupations common to business, industry and the professions. Many of these occupations not only were unknown in 1870, but were impossible. The occupations designated have assumed important positions in our national economy only because men of inventive genius and mechanical skill were able to create machines with which other men could produce—at great savings in labor and costs—conveniences and accessories for the masses. We had to learn to build trucks efficiently and economically before truck driving could become the occupation of 972,000 Americans.

The new occupations have provided opportunities for the employment of increasing numbers of women workers, and this increase in feminine employment has been an important factor in the general gain in the percentage of the population holding jobs. The largest group of women workers is found in distribution and service occupations, many having shifted to these jobs in recent years from the manufacturing and mechanical trades. This fact is evidenced by the drop in the proportion of employed women found in industry, from 26 per cent in 1890 to 18 per cent in 1930.

As evidence of the gain in other types of occupations we have the fact that in 1930, as compared to 1890, there were 38 times as many hairdressers and manicurists, 37 times as many stenographers and typists, 31 times as many telephone and telegraph operators, 18 times as many people in literary and scientific positions, 17 times as many bookkeepers and accountants, and 14 times as many clerks and copyists.

It is not only among feminine workers that employment in service and distributive occupations has advanced. Factory jobs resulting from mechanization of industry comprise but a fraction of the total number developed in the wake of technological advancement. The machines have to be fed raw materials and their products have to be made available to consumers. The efforts of many men doing many types of work are needed to supply the raw materials.

Varied channels, staffed by personnel of diverse skills and talents, are required to guide the flow of goods from the factories, through the wholesale and retail markets and into use. In 1939 there were 646,028 service-type business establishments in operation in the United States—most of which exist wholly or partially, directly or indirectly as a

In Any V-Belt Only the SIDES Touch the Pulley

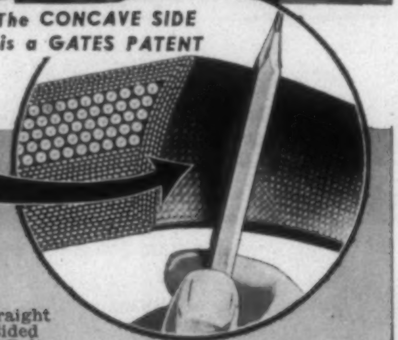
The Sides Do ALL the GRIPPING

Diagram of V-Belt in Sheave Groove

— Naturally, It's the *SIDES* that GET the WEAR!

The moment you look at a V-belt in its sheave, you see that the *sides* do all the *gripping*—They get *all the wear* against the sheave groove wall. The sides *pick up* the load. They transmit that load to the belt as a whole. And then, once more, the sides—and the sides alone—take hold of the driven pulley and deliver the power to it.

This simple fact explains why you have always noticed that the *sidewall* of the *ordinary* V-Belt is the part that *wears out first.*


The CONCAVE SIDE is a GATES PATENT

*Now See How the *Patented* CONCAVE SIDE *REDUCES* Sidewall Wear - *Lengthens Belt Life!*

Clearly, since the sidewall is the part that wears out first, anything that prolongs the life of the sidewall will lengthen the life of the belt. The simple diagrams on the right show exactly why the ordinary, straight-sided V-Belt gets excessive wear along the *middle* of the sides. They show also why the Patented Concave Side greatly reduces sidewall wear in Gates Vulco Ropes. That is the simple reason why your Gates Vulco Ropes are giving you so much longer service than any straight-sided V-Belts can possibly give.

*More Important NOW That Gates SUPER V-Belts are Available

Now that Gates *Specialized* Research has resulted in Super V-Belts capable of carrying much heavier loads—up to 40% *higher horsepower ratings* in some cases—the sidewall of the belt is called upon to do even *more work* in transmitting these heavier loads to the pulley. Naturally, with heavier loading on the sidewall, the life-prolonging Concave Side is more important NOW than ever before!

Straight Sided V-Belt

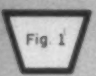


Fig. 1

How Straight Sided V-Belt Bulges When Bending Around Its Pulley

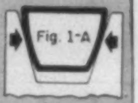


Fig. 1-A

You can actually feel the bulging of a straight-sided V-Belt by holding the sides between your finger and thumb and then bending the belt. Naturally, this bulging produces excessive wear along the middle of the sidewall as indicated by arrows.

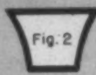


Fig. 2

*Gates V-Belt with Patented Concave Sidewall

Showing How Concave Side of Gates V-Belt Straightens to Make Perfect Fit in Sheave Groove When Belt Is Bending Over Pulley.

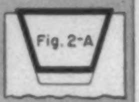


Fig. 2-A

No bulging against the sides of the sheave groove means that sidewall wear is evenly distributed over the full width of the sidewall—and that means much longer life for the belt!

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"World's Largest Maker of V-Belts"

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result of technological progress. In that year they offered jobs to an average of 1,102,047 persons and maintained a payroll of $1,069,877,000.

Although large in size and tending to grow monotonous in reading, figures such as those quoted above form the base for the pyramid of evidence which history has compiled throughout the years to support the affirmation that the machine is the world's most important creator of employment. America's ability to invent, develop, manufacture and use machinery has made her the leader among the nations. Counted by the hundreds are the new industries that have had their beginnings in this country.

The creation of jobs by the automobile manufacturing industry is the outstanding example in a field which was highly mechanized, comparatively speaking, from the beginning. Many of the industries which today are highly mechanized have become so only recently, having once been largely hand-operated. In many of these industries we find that although the introduction of machinery reduced drastically the amount of labor required per unit of production, it made possible such rapid expansion that in a short time more workers were needed than previously. For example, in the rayon industry almost incredible reductions were made in the employment per unit of production between 1929 and 1937 as a result of the development of certain labor-saving machines, yet during that same period the volume of employment was increased more than 40 per cent.

Reducing Unit Labor Requirements

In some cases the introduction of a new machine or a new technological process or technique has very directly created new employment by increasing the amount of labor required per production unit. For example, this situation occurred in the steel industry in 1926 with the introduction of the continuous cold process of strip rolling. By making possible creation of many new types of product, the adoption of the new process resulted in an increase in employment per ton of finished product. Employment showed a 26 per cent gain between 1927 and 1937, despite the fact that this period included the depression years.

It is interesting to note that the introduction of mechanical refrigeration has actually accelerated the ice business to the extent of doubling the number of ice dealers between 1920 and 1930. The place of perishable foodstuffs in the American diet became so important, once a mechanical means of keeping them fresh in the home was introduced, that the people who could not afford or did not wish to buy electric or gas refrigerators increased greatly their purchases of ice.

Industries such as those engaged in the manufacture of radios, phonographs, business machines and cash registers all showed employment gains during the depression. During those bare years the infant and fast-growing aircraft manufacturing industry employed more than seven times as many men as it did in 1923-25.

All too often in the debate of the effect of machinery on employment is one extremely important point overlooked —an analysis of the motives underlying the introduction of machinery. Too often it is forgotten that only a comparatively small proportion of new machines are installed for the sole purpose of saving labor. One authority on the influence of inventions on civilization—S. C. Gilfillan—has estimated that less than one out of three have been predominantly labor saving. Thus we see that the greatest direct effect of machinery lies in the creation of new goods and services and the more efficient production and increased quality of existing products.

Although, as is illustrated above, there is ample evidence of direct creation of new jobs to prove that machinery has been a tremendous asset to our growing country, we cannot overlook the other advantages for which it has been responsible; advantages which, added together, have made it possible for the United States to attain the highest standard of living the world has ever known. While the citizens of the United States make up only 17 per cent of the world's population they drive 80 per cent of the world's automobiles, use 60 per cent of the world's telephone and telegraph facilities, own 50 per cent of the world's radios and operate 33 per cent of the world's railroads—all products of the machine.

This generation has the advantage of many conveniences which we consider essential to comfortable living, but which once were luxuries to our fathers and mothers and were quite unknown to our grandparents. Widespread ownership of these new things—many of which are in themselves machines—among all classes of people has been made possible by the increased production and consequent reduction in unit cost resulting from the mechanization of industry.

In the peak year of peacetime production—1929—the volume of goods manufactured was three times that of 1899. Inasmuch as during that same period the population increased only 62 per cent, it is evident that there was a 95 per cent gain in per capita consumption. This merchandise was available to the general public at a price which was within their reach only because the high production capacity of the machines made possible a low unit cost.

There is practically no limit to the number of examples that can be cited to illustrate the point that prices of certain kinds of goods have been brought within popular reach because of the increased production due to the machine. If the pre-war Ford had been manufactured without the advantage of mass production methods, each car would have cost the buyer $17,850—and only about 50 Americans could have been considered as prospective purchasers each year. A half century of technological improvements in aluminum manufacturing slashed the price to one-fortieth of the original figure and made possible the distribution of aluminum products to every household in the land.

Rayon Enters the Picture

Due to the perfection of machines for the manufacture of rayon, the production of rayon multiplied ten-fold within a few years and prices to the public were reduced by 90 per cent. And it should not be overlooked that the increases in production and reductions in price were accompanied by phenomenal advances in quality.

Manufacturers of automobile tires point out that while today's tires give ten times as much service as did the tires of 30 years ago, the prices of tires have been reduced by three-fourths. In 1941 not even the most accomplished bulb-snatcher could keep one room well lighted as gauged by today's standards. The light bulbs of only a few years ago burned out so quickly that instead of today's handy carton of six, they were sold in standard packages of not less than 50, and a 60-watt bulb sold for 43 cents.

Anyone who drove an automobile in 1914 can spend endless hours recounting the now-amusing incidents resulting from the car's low standard of performance. Yet, as-

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suming that the story teller owned an average automobile, we find he paid at least $1,115 for it. According to figures prepared by the Automobile Manufacturers' Association the passenger car he bought in 1938 cost $783—and today its still a pretty valuable piece of property. To run well for nine years it had to be well made in the beginning.

As the points pile up on the side of the machine and its influence on our living standards we come to other extremely important factors that can be credited to the "machine age." Probably the most important of these are increased wages and shortened working hours. Between 1899 and 1929 there was a decline in weekly hours of work of 14.8 per cent—and during that same time the output per worker increased 68 per cent.

In 1914 the average factory wage in 25 major manufacturing industries was about 25 cents per hour. By 1938 it had almost tripled, reaching 71.3 cents. In 1919 the average weekly earnings of workers in manufacturing was $23.29 for a 47.8 hour week; ten years later the workers were paid $26.40 for 45.7 hours, and in the first six months of 1946 the pay for a 40-hour week averaged considerably more than a dollar per hour. In spite of the decline in production, wage rates continued to increase throughout the depression, reaching a new high each year. If a factory worker had been the purchaser of that 1914 automobile referred to above, it would have cost him 5,514 hours of work. The 1938 model would have cost 1,098 hours.

All of these effects of mechanization have added up to greatly increased purchasing power. When living costs and wages are compared we see that the average worker in the United States can buy nearly twice as much as an English worker, three times as much as a German and four times as much as the Italian, but only one-third more than the worker in Sweden where the mechanization of industry is comparable to that of the United States.

Between 1914 and 1938, a period including both the booming '20s and the depression years, the average weekly increase in the pay of factory workers rose 105 per cent while the cost of living increased 40 per cent. In 1938 he could buy 20 of the most widely used products, such as clothing and house furnishings, with only 30 per cent of the hours of work that would have been required in 1914.

Thus we see that the mechanization of American industry has not only created many more jobs than it has rendered obsolete, but has shortened hours, increased wages, and brought to the average American citizen desirable new goods and services at prices which raise his living standards far above those of workmen in other countries.

But in spite of these facts the debate continues just as it has for nearly 175 years—and arguments on either side haven't changed much during that time.

Since 1870 so many discoveries have been made by science, so many machines and tools to eliminate hard labor and increase production have been developed by American engineers and so many new commodities have been made available to the American public that people now accept them as part of a never-ending flow stemming from Yankee ingenuity for the purpose of making life more comfortable. Each new discovery uncovers dozens of new possibilities. Millions of dollars are now spent yearly for research by industry, government and academic institutions. Within this research lies the key to tremendous technological advances in the future.

As these improvements become, in turn, part and parcel of our national life, they will give rise anew to the old familiar question "Does the mechanization of industry cause unemployment?"

And just as it was yesterday, just as it is today, the best answer tomorrow will be "History Says No!" — From *Modern Machine Shop,* May, 1947.

MIASMIC MINDS In Labor Relations

Part Two of a Series by W. M. McLAURINE

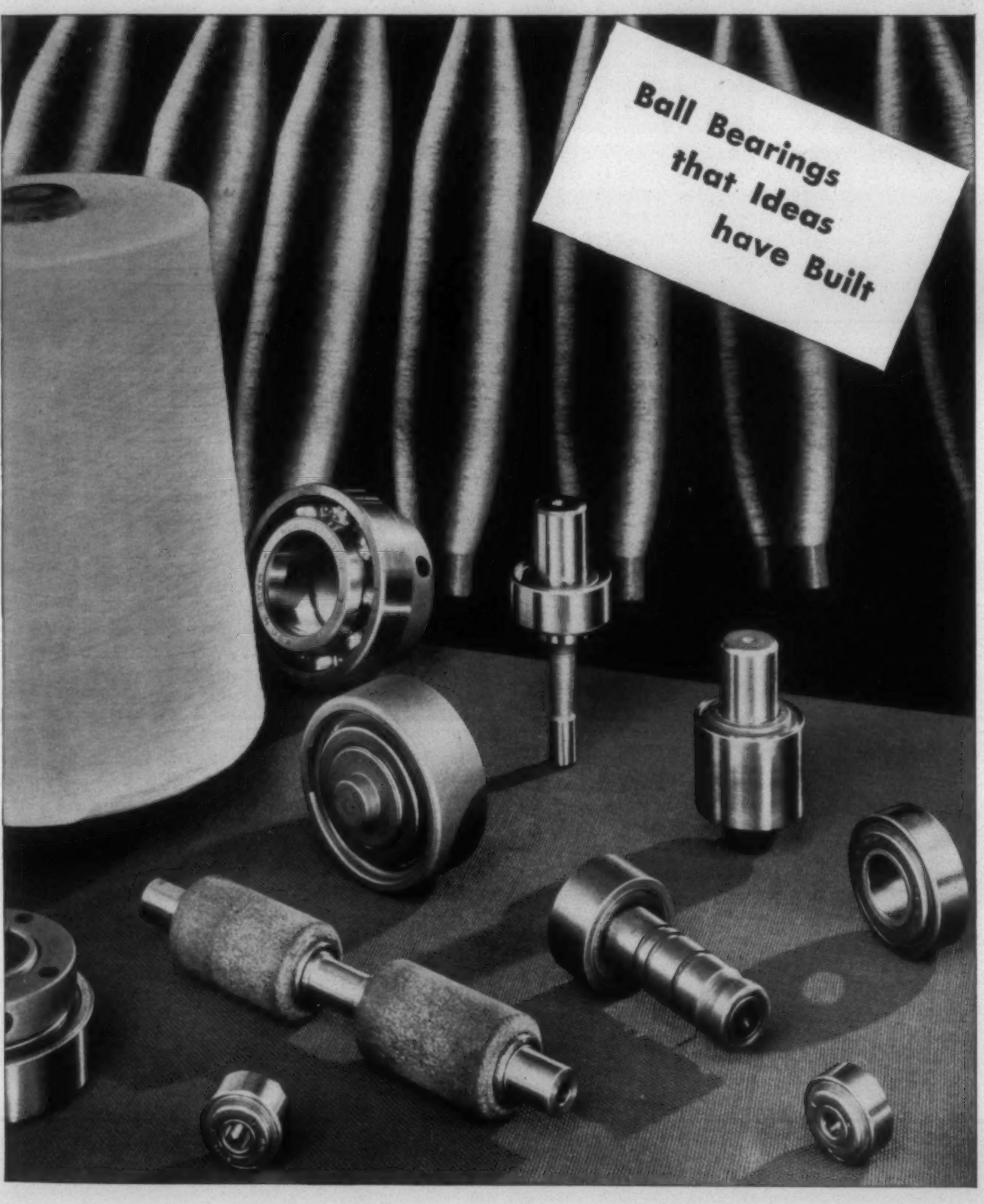
TO say that the period consumed by and between the two world wars has brought about great social and political awakening adds nothing to existing knowledge. The fact that too many people are thinking in terms of an antecedent period and directing their lives accordingly may cause these same people to scoff at the statement, and yet there are many facts that could be martialed to prove it.

The world has been shaken out of its somnolence and former tortoise movement more powerfully by the development of science than any other factor in life. Those who can appreciate this fact can understand the '20s in their material and physical madness; those who watched the scientific growth during World War II can appreciate the awful speed with which it advanced during the past decade. Again, those who read and reason, those who observe and study actions, must realize that while science deals largely with things — materials — it environs more and produces mental reactions that are not scientific.

Since science has moved out of the local crafts of individual developments in its early beginnings and has become a factor in world growth and influence, this nation—the United States of America—has always been the leader in its development. Other nations may have begun something, they may have had some ideas, but it has been this nation that have given glory and perfection to the idea. Scientific growth and development has been more rapid and widespread and more varied in this nation than in any other nation. Witness the induction of the Atomic Age and dozens, even hundreds, of scientific innovations that have come into being in recent years. Some say the impetus given to scientific development has pushed it forward 50 years during the decade.

This revolution in materials has produced miasmic minds in men. The influence and flow of things are at such a rapid rate that the social order cannot digest or assimilate them and yet they must, because the flow cannot be checked. This, then, means a careful study of the social order and the influence of science on it and how these epoch-making discoveries and inventions can be used to serve society without the disrupting and disquieting influence.

Since this discussion is not simply to portray miasmic minds in labor relations but an earnest desire to place be-



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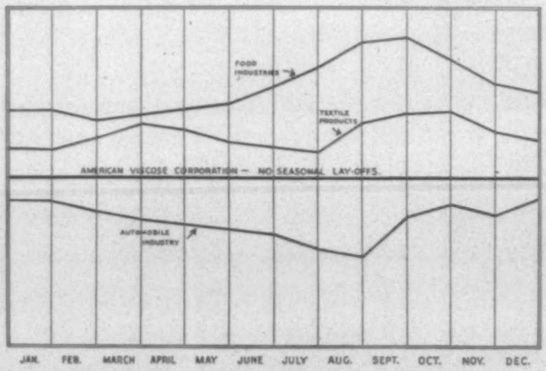
fore the reader some thoughts for cure, at least, an amelioration of their condition, it is necessary at this point to become a little historical and philosophical in order that a basis for further development may be established. These statements are based on a study of one of the Gifford Lectures given at the University of Edinburgh in 1939 by Reinhold Niebuhr.

This discussion stated that this nation leads all other nations in its scientific development. The writer is now endeavoring to give you his reason why this is so.

America has been the greatest Christian nation in the world. The chief difference between the Christian religion and all other religions is that it emphasizes the worth of individual personality, individual initiative. This idea permeated the founding fathers as they wrote the Declaration of Independence, framed the Constitution and wrote the Bill of Rights. The freedom of the individual was ascendent and ever in the spotlight of the sacred shrine of this nation as it formulated its basis for power and permanence. Not even religion curbed his ethical efforts.

Because of this, commercialism and industry grew. The right of the individual in his free and untrammeled search for constructive and free expression opened the way. For the sake of emphasis, compare this situation with the dynasties and oligarchies of other nations . . . the maharajahs of India, the landholders of England, the transference of property from one generation to another, the social, political and economic restrictions to progress, the tenants, the serfs, the slaves, the class distinctions and so many factors detrimental to the development of what this nation calls the "democratic way of life."

This deeply embedded Christian principle of individual worth of human personality was the springboard from which came all of our masters of business and scientific progress. This simple philosophy produced a climate in which both could thrive to arouse the envy and admiration of many nations. These developments in a new world and on virgin soil, in an area rich with opportunity, were the natural response to such a philosophy in such an inviting environment. Their impetus to the glorious development of the nation's greatness, with its possible by-products of conflicts, was somewhat anticipated by Jefferson in his prophetic mind, but the glamor and glory of the path to greatness was so alluring that some of the weaknesses in its maturity were not generally foreseen or anticipated.



This chart shows the steady, year-round employment at American Viscose Corp., as compared with the seasonal ups and downs of representative major industries. The figures used in preparing the chart were those for 1939, the last normal pre-war year. Viscose has managed to keep its worker needs consistent from the time it opened the first United States rayon plant in 1911, despite the seasonal nature of its principal customers, textile mills and tire manufacturers.

The growth in population and the closing of the frontiers of natural advantages have caused some discussion relative to certain social influences produced by commercialism and science as they are now practiced. This statement does not mean that they have had their day and must now be supplanted by something else. It does mean that, in their operation, there is or may be a need for some changes to meet the new social conditions that we now have — miasmic minds in labor relations for one thing.

This lecture of Niebuhr brings two charges against the development of science and its application in commercialism. They may not be true in every instance, they are true in some.

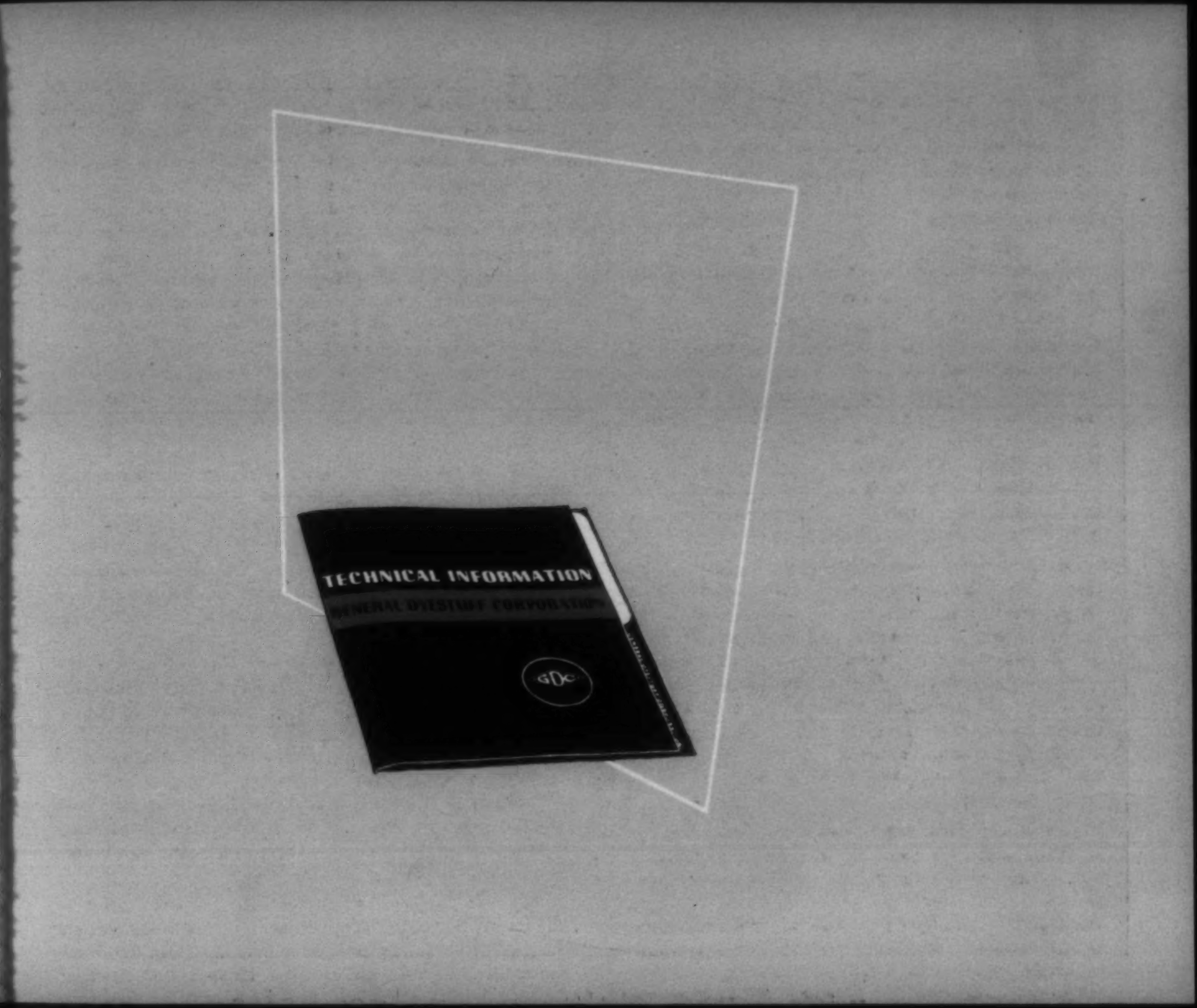
(1) "Since society has become scientific and commercial in its thinking, it no longer is mastered by nature. It is the master of nature. It does not pray for the scourge of sickness to be removed, nor for water, nor for crops, nor for a thousand things that it once did. Science has made such prayers unnecessary. Man is master of the universe—he does not need God. He has become powerful through his scientific intelligence and through its application, commercial. To be sure, society is still religious because this is a Christian nation, but most of man's religious philosophy is now embodied in abstract idealism and beautiful slogans which society pulls out in defense of its policies as it pays its respect to the ideas and ideals of the founding fathers.

"The pride and power of society, which surprises itself by the influence of its decisions upon history and the power of its actions upon nature, which discovers itself as a creator, is subtly merged with the Christian idea of the significance of each man in the sight of God."

(2) "The modern individual could not have arisen in any but a Christian culture; yet the progress of his thought destroys the Christian basis of individuality and the development of his civilization destroys the social and economic basis for the effectiveness of individual initiative, resourcefulness and decisive action. The social and economic destruction of individuality is a consequence of the mechanical and impersonal elaborations of a commercial culture which reach their culmination in the development of industrial civilization." Human and personal relationships are overwhelmed too often by the movement of things—materials.

These statements are not intended to be castigating or condemnatory. They are the natural syncretism of scientific evolution and the religion of the founding fathers in which the exact and demanding facts of science have dominated. These statements are made in the attempt to try to locate the cause of the trouble in labor relations alone. The phrase, "miasmic minds in labor relations," does not mean that any one sector of society in which science rules is any more infected than another. These muddled minds are found not only among labor and management, but among seemingly unrelated members of society and government as well.

These influences are manifested by the actions and results of so-called big business, big labor unions, organizations of farmers, exporters, importers, associations of all kinds. These all indicate the curtailment or seeming curtailment of individual freedom and that, in a nutshell, is what disturbs so many. The impinging social and economic restrictions that encircle any social segment make it



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cry out for help to save it from oppression, exploitation and death. The restrictions of freedom, security, the right to life, liberty and the pursuit of happiness are the factors involved in producing the miasmic minds. The tangled social order enmeshed in these relationships seeks surcease. Such conditions belong wholly to no one group; they are characteristic of all groups.

Since this article, which so far has discussed some general fundamentals, clusters around the theme, "miasmic minds in labor relations," the discussion will narrow itself specifically within these limits.

The coal strike, the rail strike, the steel strike and the telephone strike indicate the conflict for freedom—life, liberty and the pursuit of happiness—which labor feels have been impinged upon for some reason. The development of science has made possible a gigantic business enterprise and the writer is inclined to believe that such an enterprise was and is necessary. This enterprise must be economically sound, it must have money, and its thousands of stockholders who have bought stock with their earnings are expecting a reasonable return on their investments—money must have these returns.

Labor, as it has toiled along with management and capital, has made its contribution to general welfare, but as it travels, it grows and becomes more self-conscious, more socially conscious, more extended and demanding in its idea of life, liberty and the pursuit of happiness. They organize and make their demands, feeling that in mass-mindedness they are more influential in seeking their rights as free American citizens.

The contest is on. The freedom of rights of the managers versus the freedom and rights of the employees. It is a condition our social order, under the influence of science and its applications, has made possible. It is a condition that must be met. The miasmic minds of management and labor struggle, or should struggle, for that which is just and fair in what is supposed to be a free and fair society.

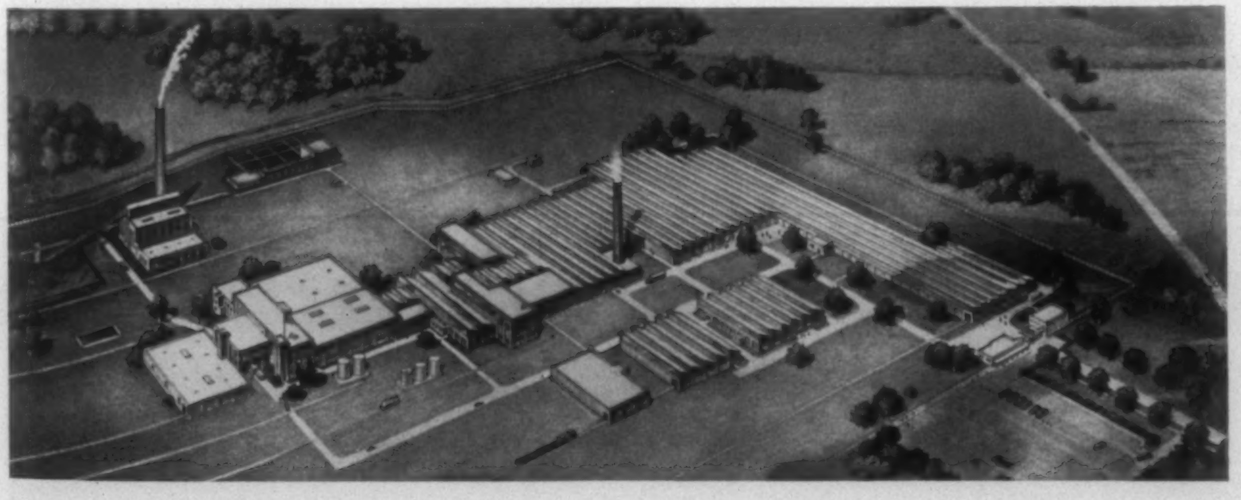
There is a complex scientific situation on both sides. Capital and its immense groups of stockholders and its physical assets are its responsibilities; the gigantic labor leader with his thousands of members and their welfare is on the other. What is just and what is fair? What happens to the public and general welfare? Glamor, prowess, the will to power, selfishness, intolerance and many other ugly elements could be a part of the picture and perhaps some of them are present while the great tolerant American public awaits the settlement. These ugly elements use force rather than reason and deter adjustments. The contract must be written, every detail must be covered because of distrust and in spite of all that can be done, "weasel words" or sentences will be incorporated. Everyone knows what the contract means, but later by reading some alien meaning into the "weasel words" an advantage may be seen on one side or the other and a grievance arises. The average business man or corporation wants to do right to all concerned. This is good business.

The greatest problem of a labor leader today is to keep his members constantly on the alert. He is always seeing ghosts of unfairness, ghosts of disaster. He must always keep them sold on the idea that not society, not the government, not management, but he alone is their sole defender and protector. Once in some industries this was true, but in this day of enlightenment, of social consciousness, there is less need for the professional labor leader than there has ever been. There may still be need for labor statesmen to properly represent the workers, but there is no need for labor bosses of the Tammany type.

Perhaps a reflection on some of the statements previously made may be appropriate at this point. Perhaps man in his new creative power and in his independence of nature and natural law, in his prowess over the lives of so many people—both management and labor leaders—there is an inflation and more psychological complex that tends toward the overlooking of the individual, the overlooking of any factors except greed and power. This is the destrutcive germ that causes materials and money to overshadow welfare and human freedoms.

If man has packed his religion into abstract idealism and put it in the ark and deposited both in the temple, only to be used during the worship period, this is the time to destroy the temple and proclaim that God is still the Creator and the Ruler of the universe and that regardless of how important any men or social group may feel that they are, His law is still supreme and the scientific age, or the age of mass action, has not destroyed or abrogated it.

Power is such a wonderful thing when it is properly



Tennessee's largest new post-war industrial development is this new rayon yarn plant, now under construction at Lowland, near Morristown, for American Enka Corp. To cost approximately $25 million, the plant is being designed, built and equipped by H. K. Ferguson Co., industrial engineering and building firm of Cleveland, New York and Houston. Located on a 700-acre site, American Enka's new facilities will produce 20 million pounds of rayon tire yarn annually with provisions for the immediate addition of two million pounds of rayon textile yarn. It is expected to be in operation by the end of this year and will offer employment for 1,000 to 1,500 people.

motivated. It is so dangerous when it is improperly motivated or allowed to get out of control. The explosion set off in a ship in the Gulf of Mexico is a slight visible and realizable example of the destructiveness of uncontrolled power, and yet this was physical and its results were physical first, and then into the far reaches of humanity.

Freedom is a wonderful asset in human life when it is properly motivated, and yet so dangerous when running rampant with improper motivation. A casual glance at one's personal life will reveal at once that there is no such thing as absolute freedom. Everyone is hedged about by hundreds of impinging environments. Physical and mental ability, environmental opportunity, food, clothing, shelter, coal, the railroad, the telephone are but a few of these that could be mentioned that cause us to be dependent and that mean the curtailment of freedom.

And yet under the influence of science and commercialism, the average citizen has more freedoms (as distinguished from the term, abstract freedom) than he has ever enjoyed. He may have suffered a loss of some once-enjoyed or fancied freedoms, but today he is enjoying more physical freedoms, more real freedoms, than he ever has. And yet, management fights for what it calls the right of the American system of free enterprise, while labor fights for its inalienable right to life, liberty and the pursuit of happiness.

To one who is not involved, other than indirectly, in these conditions, to one who has tried to clear his mind of infections of all types that could produce bias and prejudice, these conflicts seem so unnecessary and destructive.

In the evolution of society, many disastrous conflicts have occurred, not so much from choice as from ignorance. People allowed these things to happen because they were "ignorant of their ignorance," not because they were bad. They were simply so entranced with their own ideas and their operations that they failed to realize this far-reaching influence.

No one will deny that there has been exploitation. There have been unfair and unethical business practices. These same things can be said of religion, politics or any other phase of life. Today, labor is or has been riding high in the powerful circles of our social order. It has no occasion now, in most cases, to sound its belligerant battle cry for freedom unless it is to free itself from its own mess. Labor is enjoying more privileges, better hours, more pay, better working conditions than it ever has, more freedoms and privileges than any labor group in any other country of the world, and yet it fights on, forgetful of its social responsibilities, thinking selfishly of how much it can force out of capital.

Capital and investment in this nation are the envy of the world. They are smart and produce in mass what the world needs at prices the world can pay (with certain exceptions under present conditions). They are making reasonable earnings and endeavoring to serve society. With both labor and capital prosperous and both necessary to the progress of general welfare, it seems so foolish to see the ignorance that darkens the conflicts which grow out of miasmic minds, that should not exist. These conflicts forbode the disaster of both groups unless they are made unnecessary.

Capital has learned its lesson, or at least found the lesson that it must learn. Never again will it have the opportunity or desire to practice some of the policies which it ignorantly did once. Business leadership, with its social vision, has come into its ascendent position. Labor must get out of its ranks its dictators and their selfish desires. It must substitute therefor labor statesmen who can see not only the needs of labor but labor's relationships with all of the other groups of society. Labor exploitation and unreasonable demands must cease.

There are not many real differences between labor and management, when pride and prejudice and power are pushed away, so that a clear view can be had. These destructive, extraneous characteristics magnified by astute labor leaders retard co-operation, create greater losses of freedom and security than they gain. Labor and management are of the same society, the same blood and the same desires. They must take their abstract ethical and religious ideas out of their hiding places and bring them into full practical application in order that life, liberty and the pursuit of happiness may be a reality and not a theory.

This is the next frontier in our national social order. Democracy and freedom, the American way of life must be preserved Christianity and spiritual growth of all kinds can grow only in such an atmosphere. Scientific progress and commercialism can only grow in a democracy of Christian principles. There is no reason for any of the basic principles which made America great to be changed. They need only to be enlarged, expanded to meet the new conditions. There is no other form of government that always points to progress. America—the United States—is the most vital example of democracy on the earth. It is the last stand before chaos. There is every reason to believe it will stand if reason and righteousness can prevail.

Mills Resume High Output Level

With vacation periods past, cotton textile mills in the South are looking forward to increased activity and a return to their previous high levels of production for the remainder of the year, according to recent monthly reviews of Federal Reserve Banks in Atlanta, Ga., and Richmond, Va.

Mills in the sixth district, which includes Georgia, Alabama, Florida, Tennessee and Mississippi and parts of Louisiana, consumed an average of 11,482 bales daily in May compared with the high consumption of 13,121 in January. Though mills in Georgia accounted for most of the decrease, the report stated, they were mainly coarse yarn mills that had to curtail operations because of the depressed state of the chenille, heavy duck and cotton-hosiery industries. Cotton duck mills had reduced their operations because the government was disposing of large supplies of heavy cotton duck, it was stated. Fine yarns and fabrics were reported as still in great demand and prices for them appear to be firm. Plants producing toweling, sheeting, gray goods, tire cord and mixed fabrics are operating at almost capacity production, the report added.

The review covering the Carolinas, Virginia, West Virginia and the District of Columbia said most cotton textile production for the rest of the year has already been sold, and demand for textile products showed no tendency to decrease.

Finished Goods Production Drops

A total of 2,195,000,000 yards of cotton, rayon, nylon and similar fabrics were bleached, dyed, printed and finished during the second quarter of 1947, the Bureau of the Census reported recently. This was 90 million yards, or four per cent, less than in the first quarter of 1947.

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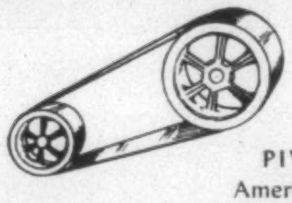

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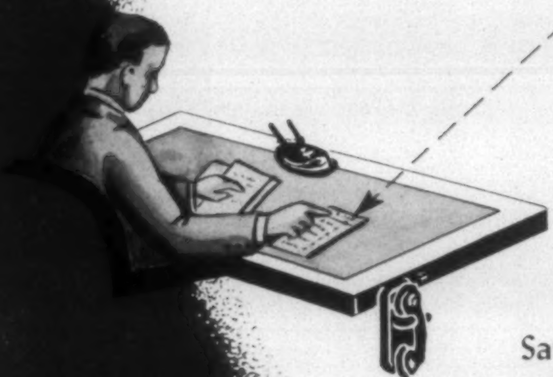

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The Electrical Code & Textile Mill Wiring

Part One of a Series by JAMES T. MEADOR

THE National Electrical Code is a standard set of rules applying to electrical wiring and apparatus in all forms and places of use, or as the insurance engineers term it—use and occupancies. The code is the outgrowth of the efforts of the National Fire Protection Association which, in connection with the National Board of Fire Underwriters, publishes the code in book form.

The purpose of the code is the protection of persons and property from hazards arising from the use of electric power and lights and other related equipment with which we come in contact in our complex lives of many interests. It covers all forms of wiring and equipment in either public or private occupancy of every kind, including every kind of appliance, toy, gadget, light fixture, every length and type of wire or other conductor, or anything else that might use electricity.

The requirements of the code are on a minimum basis in that they are so set or rated that they will cause an installation to be made safely and to meet the needs without presenting a hazard. Whereas, you might want to install more or larger wires or conductors, for instance, to allow for more future capacity, to take more machines, etc. Therefore compliance with the code will result in a safe job that will always meet the approval of the insurance inspectors who use the code, also, as a handbook of standards, and who are likely to drop in on your plant at any time for a nice sociable visit.

Since TEXTILE BULLETIN goes into all of the states of the South, we will endeavor, by next issue, to give the names and addresses of men in particular states who are responsible for the interpretation and enforcement of the code. The reason for this is that there are sometimes controversial questions coming up regarding just exactly what the meaning or intent of the code might be on some special part of a job. You might not fully appreciate or understand what I am trying to tell you in this particular connection until you get into a spot with your local inspection engineer. And, then, you can call on your state electrical inspector to act as an advisor or referee in the case. Such a system is always helpful to all parties concerned.

The code is intended for use, not only by insurance inspectors, as mentioned above, but also for application of rules and standards and their enforcement by your local and state governmental agencies, such as electrical inspection and fire departments.

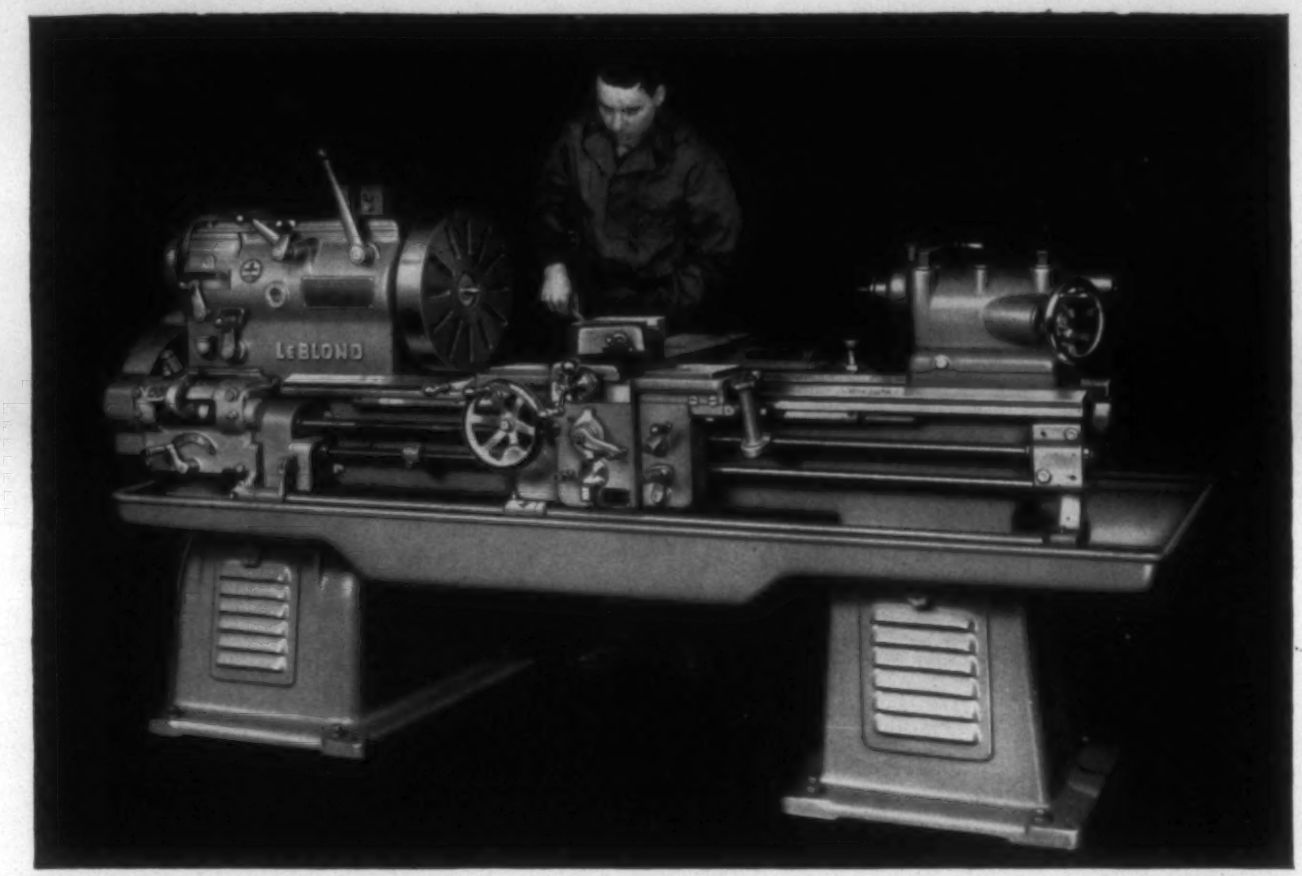
In case of the necessity for an interpretation or ruling regarding some special question or application before the next issue of TEXTILE BULLETIN, I would suggest that you address your request to the National Fire Protection Association, 60 Battery March Street, Boston 10, Mass. Or, if you like, just mail it to Box 1225, Charlotte 1, N. C., and we will attempt to get you a quick reply.

Approved Methods for Wiring

In Chapter 3, Article 300, the code permits and approves within the safe designated limits of voltage and load carrying capacity, the following methods of wiring which are applicable in the textile industry: open wiring on insulators, bare conductor feeders, armored cable (PX cable), rigid metal conduit, flexible metal conduit, electrical metallic tubing, surface metal raceway, under-floor raceway, wire ways and bus ways.

For an explanation of these approved methods, the National Electrical Code has the following to say in general:

Opening Wiring on Insulators—This type of wiring must not be used in opening rooms and picker rooms, but is permitted in cotton storage areas and other sections of the mill. The wire or cable may be any of the many types available on the market, and it may be supported by B. & D. cleat type insulators, screw type "house knobs" of various sizes, depending upon the size of the wire or cable. Open conductors must be supported by the above types of insulators or any other non-combustible, non-absorptive insulation material under usual requirements, such as runs, etc., at intervals of four feet, six inches, with this distance to be shortened if the conductors are likely to be tapped onto, or otherwise disturbed, at which point the knob or cleat support must be within six inches of the tap. In textile mill construction wires or cables No. 8 and larger may be separated about six inches and run directly from beam to beam, with the insulator support on each beam. If wires or cables are in a safe place and are not likely to be disturbed they may be supported by these insulators at intervals not greater than 15 feet with a spacing between themselves of not less than six inches. For systems of not over 300 volts, the cables must be separated with $2\frac{1}{2}$ inches clear distance between them, and with one-half-inch clearance between them and the surface under them. For systems of 301 to 600 volts, except as mentioned above, the spacing must not be less than with four-inch clearance between wires or cables, with one-inch clearance to the surface under them. Open wires or cables must be separated from contact with walls, floors, partitions, etc., through which they pass by means of porcelain tubes, bushings or other non-absorptive and non-combustible insulating material. Wires or cables within



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seven feet of the floor are considered as exposed to mechanical injury, and must be protected by either having guard strips of at least seven-eighths-inch thickness and as high as the insulating supports, placed on each side of and close to the wiring; or by a running board at least one-half-inch thick back of the cables with side protection. These running boards must extend at least one inch outside the conductors and not more than two inches, and the protecting sides must be at least two inches high and seven-eighths-inch thick; or by boxing all the way around the conductors with a clearance of at least one inch from the conductors.

Bare Conductor Feeders—Bare conductors, such as either flat or tubular bus bars, may be installed for use as feeders only and with a current carrying capacity of 1,000 amperes per square inch cross-sectional area in non-ventilated enclosures, or 1,200 amperes per square inch in ventilated enclosures, and they must be enclosed with non-combustible material, as well as be rigidly supported by the proper type of heavy duty insulators, with a clearance of at least two inches when mounted on the same surface, or one inch when held in free air, or one inch to ground, all for 600 volts or less, only. We will not give the spacing for higher voltages at this time, as this will be taken up at a later date.

Armored Cable (B-X)—We are all more or less familiar with this, except that we must emphasize the fact that B-X cable is dangerous to use on 600-volt service in mills, such as on individual motor drives, etc.

Rigid Metal Conduit—This, too, is a system of wiring with which we are all more or less quite familiar. However, there are a few points of general information not usually brought out that we should all be familiar with. Rigid metal conduit may be used under all atmospheric conditions and occupancies, except that enamelled coating of both conduit or fitting is not sufficient for protection against severe corrosive conditions, such as dye houses, etc., in which case there should be used either galvanized or Sheradized or otherwise treated conduit and fittings. Cadmium plating is good, and is frequently used by some manufacturers on their fittings. In wet locations where likely to be washed down by hose, the conduit system must be made waterproof and installed so that there is an air space of one-half-inch between it and the wall or surface upon which it is mounted.

Electrical Metallic Tubing—This is subject to the same general conditions as rigid conduit, except that it must be protected a great deal more from the possibility of mechanical injury.

Flexible Metal Conduit—The use of this material is limited to motor connections or other applications where there is likely to be some movement present, or where a connection would be out of line in a termination of a line. Later on, we will go into these applications more fully.

Surface Metal Raceways—This type of material may be used only in dry locations, and must not be concealed except that the back and sides may be surrounded by the building finish (plaster, etc.) with the face of the system exposed. It must not be subject to severe mechanical injury, nor must it be used for more than 300-volt service unless the metal has a thickness of .040-inch or more, nowhere subject to corrosive vapors, not in hatchways or hazardous places. No. 6 cable is the largest conductor permitted to be used therein. Except in multi-outlet assemblies, raceways may be extended through dry walls, floors and partitions if in unbroken lengths where passing through.

A. S. M. E. Textile Unit Plans Meeting

The textile division of the American Society of Mechanical Engineers will not hold its mid-winter meeting in union with the parent society at Atlantic City in December, but will meet separately during the same month in either Boston, Worcester or Providence, W. Arthur Smith, Jr., vice-chairman of the division, stated recently.

The exact date and site will be decided soon, he added. The date will not conflict with the Atlantic City meeting because some members of the textile unit will wish to spend time at the larger session, he said. The textile meeting will occupy at least one full day and evening and may grow into a two-day affair, Mr. Smith continued. At least 250 of the 500 members are expected to attend.

Permission to hold an independent meeting was granted by the society because the Atlantic City A. S. M. E. meeting is expected to be larger than ever before. Therefore both the time and space will be lacking for the expanded activities planned for the textile unit, Mr. Smith explained.

Since the last meeting, personnel of two new committees have been selected and changes in a third, the committee on vibration, have been proposed, Mr. Smith announced. The management committee, of which Nathaniel M. Mitchell of Barnes Textile Associates, Inc., is chairman, now consists of A. D. Asbury, J. E. Sirrine Co.; J. R. Mason, Millville Mfg. Co.; J. J. McElroy, Maverick Mills; R. E. Oberholtzer, James Lees & Sons Co.; Albert Palmer, Crompton & Knowles Loom Works, and C. S. Parsons, Chicopee Mfg. Co. of New Hampshire.

The new committee on fabrics is now composed of Gordon B. Harvey, Draper Corp., chairman; Julius B. Goldberg of J. P. Stevens Co., Inc., and Walter J. Hamburger, Fabric Research Laboratories, Inc. The committee on vibration, under the chairmanship of C. E. Crede of the Barry Corp., will henceforth be composed of fewer people but will take on more activities, Mr. Smith said.

Instrument School To Start Sept. 15

Brown Instrument Co. has announced that next month it will start the 12th consecutive year it has conducted continuing courses of training in industrial measuring and control devices at its school of instrumentation in Philadelphia. Enrollments closed Aug. 1 for the first 1947-48 term which opens on Sept. 15. Classes for the fall semester will be made up of engineers and instrument staff members of customers of the industrial division of Minneapolis-Honeywell Regulator Co. The group will include representatives from China, India and other countries. The course will include instruction in pyrometers, continuous balance electronic potentiometers, electrical and air-operated automatic controls, flow meters and thermometers. The first semester will end on Dec. 12.

Committee D-13 on Textiles of the American Society for Testing Materials will hold its fall meeting Oct. 15-17 at the Benjamin Franklin Hotel in Philadelphia, Pa. Highlighting the meeting will be two sessions on Oct. 16, including an afternoon technical symposium on flammability, to be followed in the evening by the presentation of three papers on textile fabrics and fibers. The latter session is being jointly sponsored by the Philadelphia A. S. T. M. district and the textile committee.

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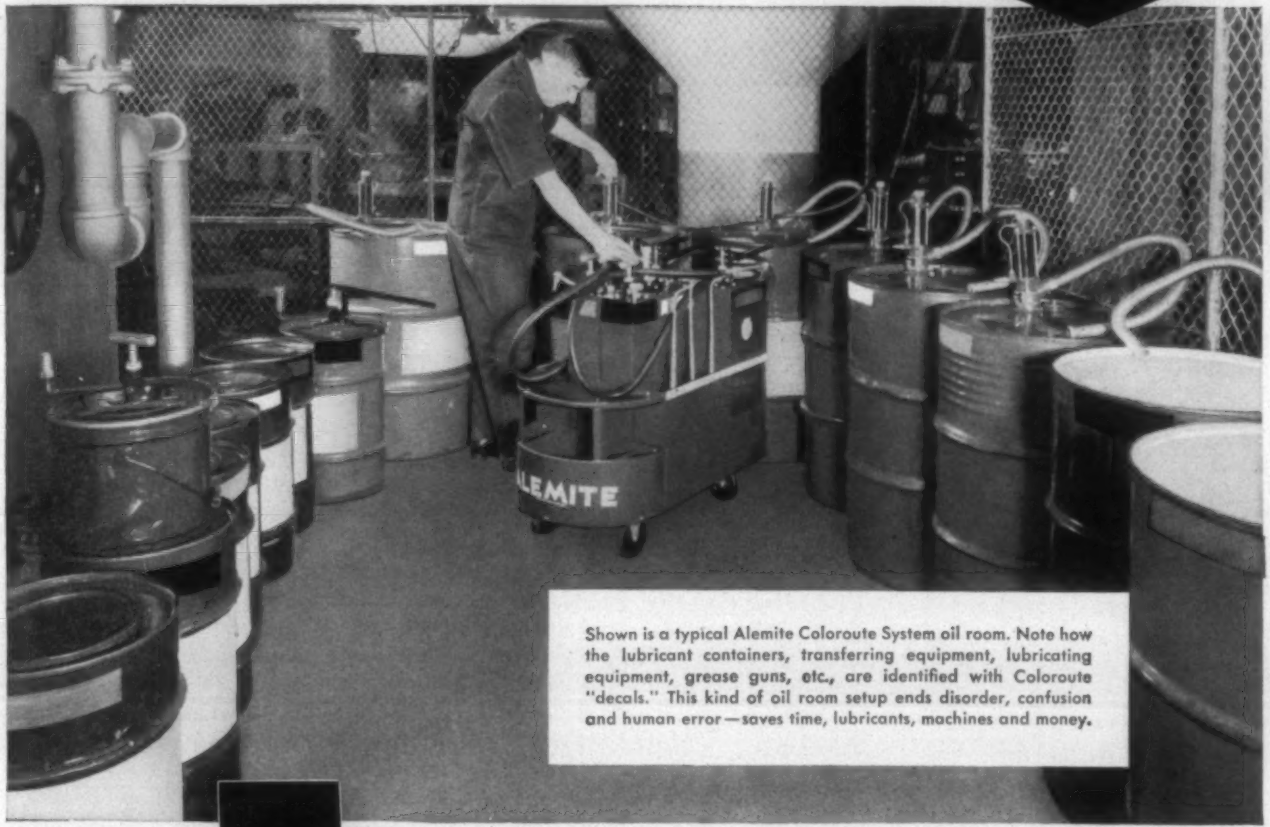

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Could Have Been Better Placed

The Callaway Institute of LaGrange, Ga., and the Callaway Mills of the same city, have jointly made a donation of $100,000 for the erection of a Stuart W. Cramer building at the Institute of Textile Technology at Charlottesville, Va.

We realize that the Callaway Institute and the Callaway Mills have a right to donate money to any purpose they choose and that naming a building for the late Stuart W. Cramer is entirely appropriate because after a long career during which he was "tops" among Southern textile machinery salesmen, he built a large mill at Cramerton, N. C., and became one of the leaders in the textile industry and especially in the American Cotton Manufacturers Association.

We cannot, however, help believing that much more would have been accomplished had such a building been erected at the School of Textiles at Georgia Tech.

The establishment of the Institute of Textile Technology was predicated upon the idea that a similar organization had done much for the paper industry and therefore great things could be done for the cotton textile industry.

Such reasoning was illogical but because the magic word "research" was used, a very large sum was subscribed for the project.

The Paper Institute did succeed because it was dealing with inexpensive wood pulp and any product made could be sold at a higher price than wood pulp.

With cotton and cotton goods the problem is entirely different.

If research is directed towards low cost bulk production, the product cannot compete in price with paper and jute.

If research is directed towards a higher quality of cotton goods and yarns, little can be accomplished because of competition with an ever increasing and ever improving range of synthetic fibers and the blends which can be made with same.

In our issue of May 15, 1943, we said relative to the Institute of Textile Technology:

> We do not wish to throw cold water upon any form of research in the cotton textile industry but we are not certain that there will be an adequate return upon any and all funds spent for textile research and are afraid that some may be disappointed with results obtained.

Again in our issue of June 15, 1943, we said:

> Those who are enthusiastic about highly technical cotton textile research have to paint pictures of future possibilities because they have no exhibits to place before the cotton manufacturers whose funds they seek. We predict that two years from now there will still be only pictures of the future.

Four years have passed, instead of the two we mentioned, and we fail to see anything which has been accomplished for the cotton textile industry. We are informed that during the four years the cost of operating the Institute of Textile Technology has been considerably in excess of $2,000,000.

What is even more important is that they do not today even suggest what is expected to be accomplished.

It would be much more pleasant to "whoop it up" for the Institute of Textile Technology and we realize that we are stepping on toes when we call attention to the failure to accomplish any worthwhile results.

We are for everything which will benefit the cotton textile industry but we are not willing to back something which requires large expenditures, unless we can reasonably expect results which will justify such expenditures.

It is not, in our opinion, sound thinking to say that because the Paper Institute did remarkable things with low priced wood pulp, there is reason to expect accomplishments from scientific research in the cotton textile field.

Had the Institute of Textile Technology been located in some textile center where there would have been contacts with textile manufacturers, its methods of research might have been changed to more practical objectives, but because it is isolated at Charlottesville, Va., it does not even have the benefit of contacts with mill men.

We are a strong supporter of plans to have virile schools of textiles at North Carolina State College, Clemson College and Georgia Tech, and it is our opinion that in a few years the well educated young men they send into the mills will do much for the textile industry.

Many of the young men, educated in the three textile schools, will be research minded and it is our opinion that the improvements they make in textile manufacturing processes will greatly benefit the industry.

Some men bored oil wells in Texas and Oklahoma and reaped a harvest of dollars.

Other men recently bored oil wells in eastern North Carolina upon the theory that because there was oil on the Texas coast there should be oil on the North Carolina coast. They lost all the dollars they invested.

Because the Paper Institute took inexpensive wood pulp and produced paper products which could be profitably made, others assumed that a textile technology institute could make cotton textile products which could compete in price with paper and jute and others which could compete in quality with synthetic fibers.

The men who bored for oil in North Carolina discovered that their theory was wrong and have abandoned their projects.

Four years after the Institute of Technology launched its program it stands before the textile industry with empty hands and it is our considered opinion that four years from now it will stand in the same position.

We derive no pleasure from making that statement and we would be much pleased if time proved that we were wrong.

We feel, however, that the Institute of Textile Technology has about as much chance to accomplishing worthwhile results as those who bored wells in North Carolina had to find oil.

No magic can produce cotton textiles which can compete in price with paper and jute or other textiles which will be a real competitor with nylon and other synthetic fibers.

The greatest hope of the cotton textile industry is through improvements in the manufacturing processes of our mills and we believe that the most sensible method is to give our young men the best textile education which can be provided and depend upon them for lower costs of production and a higher quality of product.

Instead of becoming angry with us because we question the possibility of the Institute of Textile Technology producing results, we feel that with the experience of four years and the expenditure of more than $2,000,000, the supporters of the project should put the cards on the table and tell the textile industry what it can expect to gain by continuing to expend $500,000 to $700,000 per year.

Industrial Recreation Course

North Carolina State College, Raleigh, has taken a very forward step in establishing a course in "Industrial and Rural Recreation."

Shorter working hours, and greater interest in recreation, has brought a demand for men trained to handle recreation programs.

While industrial corporations are interested in the health and physical development of their employees, physical education does not offer a complete answer to their problem.

They desire, as directors of recreation, men who can take full charge of recreation programs which include not only baseball and basketball but organized play for children and young people.

The course in Industrial and Rural Recreation, as set up at North Carolina State College, will be a four-year course, which will not only give the student a well rounded education with special instruction in physical education, but will provide studies in handling people and in organizing recreation programs.

In their junior and senior years those who expect to seek employment at textile mills will take some studies in textiles so as to have a talking knowledge and be able to fill some mill positions while those who expect to seek positions in rural areas will take courses in crops and fertilization.

We predict that there will be a steady demand for those who graduate with a diploma in industrial and rural recreation.

Labor To Benefit By New Law

Deprived of the privileges enjoyed under the Wagner Act, leaders of organized labor continue to denounce the Taft-Hartley Act as "a slave law." That is pure nonsense. Actually the new law has already benefited labor, not because of its regulatory provisions, but in spite of them. It has served, like a dash of cold water, to restore both labor and management to consciousness of the fact that it may be to their mutual interest henceforth to avoid rather than invite litigation, a sound principle in any business relationship. In doing so, it has created a common cause which may in time lead to a revelation that labor and management have other and more fundamental causes in common.

They may yet come to realize that their relations are essentially economic.—*Richmond* (Va.) *Times Dispatch.*

Spinner-Breeder Conference

We had the pleasure of attending the Spinner-Breeder Conference held at the School of Textiles at North Carolina State College, Raleigh, Aug. 28, 29 and 30 under the auspices of Delta Council Advisory Committee of Stoneville, Miss.

The Spinner-Breeder Conference was held in 1946 at Hartsville, S. C., in 1945 at Stoneville, Miss., and will go back to Stoneville in 1948.

It is a get-together of cotton manufacturers, cotton breeders and cotton buyers and is primarily intended to promote discussions of cotton qualities and enable the breeders to learn the cotton qualities desired by the cotton manufacturers.

Addresses on behalf of cotton manufacturers were made by John W. Clark, Randolph Mills, Franklinville, N. C.; John M. Caughman, Spartan Mills, Spartanburg, S. C.; L. K. Fitzgerald, Dan River Mills, Danville, Va.; and Dr. Fred Bonnet of American Viscose Corp., Marcus Hook, Pa.

Addresses for cotton buyers were by T. D. Truluck, Deering, Milliken Co., Union, S. C.; Ernest Carpenter, Greenwood (S.C.) Cotton Mills; and W. M. Garrard, Staple Cotton Co-operatives, Greenwood, Miss.

Addresses on cotton breeding were by Thos. S. Kerr and George Harrison of the U. S. Department of Agriculture and S. L. Calhoun of the Delta Experiment Station, Stoneville, Miss.

Thomas Upchurch of Raeford, N. C., and Dean Stahlman of Las Cruses, N. M., presented the views of the cotton farmers.

Not only were the addresses excellent but each was followed by discussions which at times became very spirited. This was especially so when John Caughman presented, during his address, samples of dirt and trash taken from cotton bales and compared the waste from the cotton bales with the clean and even fiber obtained from bales of rayon.

We are of the opinion that the Spinner-Breeder Conferencme was well worth while.

Senator Pepper's Statement

Senator Claude Pepper of Florida is quoted as saying: "I don't even know if General Isenhower is a Republican or a Democrat. I do think that he is such a good man that he is entitled to the presumption that he is a Democrat under our laws which provide that a man is innocent until he is proven guilty."

The people of this country likewise do not know whether Senator Pepper is a communist or a loyal American.

Many are convinced that he is the former but can do nothing until he is proven guilty.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

Dublin, Ga.—After the recent acceptance by the War Assets Administration of a bid of $615,000 by Burlington Mills Corp., Greensboro, N. C., for the New River Ordnance Plant, Dublin, Mohawk Carpet Mills, Amsteardam, N. Y., asserted that W. A. A. had acted in a "highly arbitrary" manner, since Mohawk had been the original bidder for the plant, had tendered full payment of $608,601 and had assigned personnel for eight months to effect transfer of the property. In announcing approval of the sale to Burlington, W. A. A. pointed out that the sale of the facility was approved in February to Mohawk but that the transaction was never consummated. Burlington has estimated employment at its newly acquired plant of more than 1,000 workers with an annual payroll of more than $2,000,000.

Maiden, N. C.—A new yarn mill of steel and brick construction is nearing completion on the Lincolnton highway south of here. Mr. and Mrs. D. B. Johnson, president and treasurer, respectively, of the J. & J. Spinning Co., Maiden, are owners of the building. The structure covers approximately 20,000 square feet.

Kingsport, Tenn.—Borden Mills, Inc., Kingsport, has formed a non-profit organization, Liberty Rental Housing Corp., to build and administer 100 modern homes for World War II veterans employed by the mill. The incorporators are John C. Borden, W. J. Still, E. C. Cross, J. Harry Sloan and E. G. Hunter. The new development on a 20-acre tract is in addition to the present Borden Mills village of 300 houses.

Kings Mountain, N. C.—Kings Mountain Narrow Fabric Mills is operating 21 looms on insulation tapes and bindings. James R. Riley is president and treasurer, Gordon R. Riley is secretary, and Carl W. Moss is superintendent of the company.

Greenville, S. C.—Ainsley Mills, a Greenville manufacturing concern, has been chartered. Incorporators are J. M. Perry and M. P. Gaines, both of Greenville. W. Francis Marion is president.

Rockingham, N. C.—Fifty per cent interest in Pee Dee Mills Co. Plants Nos. 1 and 2, Rockingham, have been sold for approximately $1,000,000. The sale was made by M. M. Clairmont of New York, president and treasurer of the mills, to D. C. Georgopoulos, also of New York and representing interests of Athens, Greece.

Greensboro, N. C.—Bur-Green Fabrics, Inc., Greensboro, has been incorporated to deal in textile products, with an authorized capital stock of $100,000 and subscribed stock of $400, by E. C. Wright, Jamie C. Loy, both of Greensboro, and Edmund W. Koury of Burlington.

Raeford, N. C.—White-Tex Mills, Inc., Raeford, has resumed partial operations after being closed since June. The mill, which employs approximately 125 workers and spins carded yarns in the 20s to 30s range, will operate on a one-shift, five-day week temporarily. The plant has been thoroughly overhauled, and new machinery for spinning, picking and carding has been installed. The number of spindles at the mill has been increased from 6,000 to 7,500.

Spartanburg, S. C.—Spartan Mills, Spartanburg, recently honored 464 long-service employees by awarding them citations and service pins. The employees, in turn, presented Walter S. Montgomery, president of Spartan, a gold watch as a token of esteem.

Rock Hill, S. C.—A general repair and renovation program designed to make Aragon-Baldwin Mills and its village the most modern and comfortable in the South is under way here. A great portion of the work on the company's 175 houses has been completed with the exception of painting, which will be undertaken next spring and summer. Included in the interior repair work to the employees' homes are new type windows, new trims in rooms which are sheet rocked, improvements to the village water system by additional taps in the homes, and the installation of sinks and drainboards. Bathrooms have been added to homes which were built without them. The modernization project in the mill itself has resulted in the installation of a central station humidifying system to make working conditions more comfortable for employees, placement of fluorescent lighting equipment, and the painting of the mill interior.

Chattanooga, Tenn.—An addition will be constructed at the No. 2 Thatcher Plant of Standard-Coosa-Thatcher Co., Chattanooga, as part of a $400,000 expansion program. The addition will contain 35,000 square feet.

Hickory, N. C.—Fine Arts Fabrics, Inc., a firm organized to manufacture women's dress goods, is scheduled to begin operations here soon. Capitalized at $200,000, the new plant is situated on property formerly occupied by Better Built Bedding Co. on the Newton-Hickory highway just east of here. Officers of the corporation are C. E. Clark, president; E. J. Wentz, vice-president and manufacturing manager; and R. H. McComb, mayor of Hickory, who will be secretary-treasurer and business manager.

Goldville, S. C.—Joanna Textile Mills Co., Goldville, recently honored 400 long-term employees in public exercises. W. A. Moorhead, general manager and vice-president of Joanna, and Gov. J. Strom Thurmond of South Carolina spoke at the exercises.

Mooresville, N. C.—A $2,000,000 expansion program at Mooresville Mills will be completed about Jan. 1, according to J. F. Matheson, president of the company. Nearly doubling present capacity for making washable rayon fabrics, the new installations will consist of a windowless, air conditioned building and new equipment costing more than $1,500,000. Approximately 62,000 square feet of floor space will be added to present productive facilities.

Greenwood, S. C.—Between 400 and 500 residents will be added to the population of Mathews Mill community

14" No. 32 Slip-Not Belt, driving 36 cards with 75 h.p. motor, swung on pivoted type ceiling motor base.

This is one among number of such drives giving maximum performance in a large Southern textile mill.

Slip-Not Belts are uniform in thickness; they give maximum pulley contact with less slip, longer life and greater production.

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Sell Us Your Surplus Yarns

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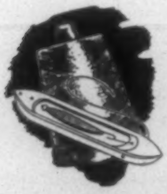

Plans and designs for all types of projects related to the textile industry. Appraisals, modernization studies, machinery layouts, air-conditioning, power and water filtration plants, and other phases of textile engineering.

ROBERT AND COMPANY ASSOCIATES
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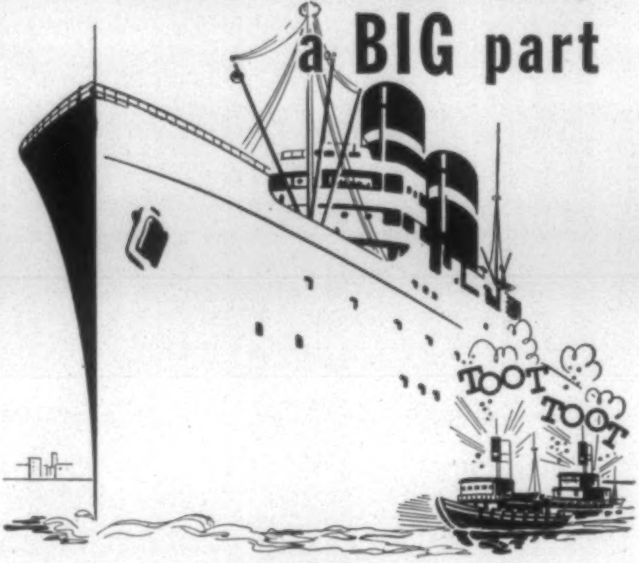
ATLANTA

TWENTY-NINE YEARS' NATIONWIDE EXPERIENCE IN INDUSTRIAL AND TEXTILE DEVELOPMENT

Little things play a BIG part



. . . in low-cost yarn production

Aprons can push yarn production costs around just like tugs do a liner. They're little—but the way they fit, grip and wear is vital to production, quality and costs.

The *precision* fitting of KENTEX Aprons has earned them an enviable reputation in the textile field. Made of finest quality leather, by skilled craftsmen, they are *michrometer gauged* for thickness, width, length and circumference. *We guarantee a sure fit.*

Write for prices and free samples of KENTEX precision-built Aprons.

KENTEX
PRECISION
APRONS

TEXTILE
APRON COMPANY
EAST POINT, GEORGIA

when the new houses being constructed have all been completed. The new houses are five-room brick structures and follow the same general design of the other attractive and convenient houses of the village.

GREENSBORO, N. C.—Greensboro has been chosen as headquarters for the purchasing of all synthetic yarns and supplies for J. P. Stevens & Co., with such activities to be handled through the offices of W. J. Carter, vice-president of the parent concern and chief executive of Carter Fabrics Corp., a subsidiary.

HUNTSVILLE, ALA.—Huntsville Mfg. Co. has been awarded a two-starred Liberty Mutual Insurance Co. flag for having a 92 per cent decrease in accident frequency for the first six months of 1947 and also for operating, within a period of one year, two consecutive periods of a million man-hours each without a lost-time accident.

BLACKSBURG, S. C.—Carolina Converting Mills Co., Inc., has received a state charter with capital stock of $30,000. Morris Malinow is listed as president.

NEWBERRY, S. C.—Finishing touches are being put on two buildings 4½ miles from Newberry which will house 50 looms. A third building is being erected to house an additional 50 looms, according to Frederick Weir, operator. The plant will produce print cloth.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Lewis A. Crawford, a recent graduate in textile engineering from Clemson College, Clemson, S. C., has become associated with Joanna Textile Mills Co., Goldville, S. C., as assistant superintendent in charge of third-shift operations.

E. R. Swing, superintendent of bleaching and finishing at Cannon Mills Co., Kannapolis, N. C., has been named to the board of trustees of the Independent Student Aid Association, organized to assist young students with loans and scholarships. . . . Robert W. Crutchfield, auditor and tax accountant for Cannon, will return to the University of North Carolina, Chapel Hill, as associate professor of accounting.

Arthur Erlandson, credit manager for Nashua (N. H.) Mfg. Co. for the past 12 years, has been appointed also as credit manager of the parent company, Textron, Inc.

Walter B. Parker has been appointed superintendent of the woolen plant of Fieldcrest Mills at Spray, N. C., succeeding Halsey B. Leavitt, Jr., resigned. Mr. Parker was superintendent of Faulkner and Colony Mfg. Co. at Keene, N. H. Mr. Leavitt has succeeded H. L. Carlisle as superintendent of Atlanta (Ga.) Woolen Mills Corp.

Harold T. Heathcote has joined the sales staff of Whitin Machine Works and Robert A. Hargreaves is the new manager of the firm's rayon division. Mr. Heathcote will represent the company on cotton machinery in the Northern states and in Canada.

Fulton Hutchinson, formerly assistant superintendent of Huntsville (Ala.) Mfg. Co., has assumed new duties as superintendent of Saratoga Victory Mills, Inc., Guntersville, Ala.

T. R. Morton has resigned as general overseer of carding, spinning, twisting and winding at Dallas (Ga.) Cotton Mills to accept a position as general overseer of carding, spinning, winding and warping at Magnolia (Ark.) Cotton Mills.

R. M. Ross, formerly with Norris Cotton Mills Co., Cateechee, S. C., as overseer of carding and spinning, has accepted the position of overseer of carding with Appleton Co., Anderson, S. C.

Donald Carroll has been appointed manager of United States Rubber Co.'s tire cord plant in Scottsville, Va., and of its Seaboard-Stevens plants in Burlington, N. C. Key members of Mr. Carroll's staff will be Stephen A. Ward, assistant to the manager at Scottsville; R. M. Mitchell, Jr., assistant to the manager at Burlington, and F. C. Phillips, superintendent of the Seaboard-Stevens plants.

G. E. Gregg, assistant vice-president of Burlington Mills Corp., Greensboro, N. C., has resigned to become associated with William Klopman & Sons in its Greensboro office. He will be engaged in the Klopman production division. . . . William F. Geodecke, merchandising manager, has been elected vice-president of Stark Bros. Ribbon Corp., the narrow fabrics division of Burlington Mills Corp.

Richard C. Dowling and Harold C. Wood are recent additions to the sales staff of Arnold, Hoffman & Co., Inc., Providence, R. I. Mr. Dowling will be attached to the firm's Philadelphia, Pa., office, and Mr. Wood will have headquarters in the Boston, Mass., office.

E. Wayne Haley has been appointed director of sales for Southern Alkali Corp., a subsidiary of Pittsburgh Plate Glass Co. Associated with Southern Alkali since 1935, Mr. Haley has served as assistant director of sales for the past 12 years. As director of sales he succeeds Eli Winkler, who will continue with the firm in the capacity of sales consultant. . . . Robert L. Hutchison has been appointed general superintendent for Pittsburgh's Columbia Chemical Division and for Southern Alkali Corp. He has served as superintendent of the division's alkali producing plant at Barberton, Ohio, for the past seven years.

Robert Amory, manager of the Boston, Mass., office of Crescent Corp., has resigned to take up new duties as a vice-president of Springs Mills, Inc., in the New York headquarters of that organization. . . . Also recently elected vice-presidents of Springs Mills, Inc., were John Geil, W. J. Hunter and R. A. Stephenson. . . . Other new officers of the company are C. N. Rice, treasurer, and Norman C. Wynroth, assistant secretary. . . . Tycho Nissen, formerly plant engineer for Stonecutter Mills, Spindale, N. C., has become affiliated with Springs Cotton Mills, Lancaster, S. C., as maintenance engineer of the new bleachery near there.

Reuben J. Jennings has been appointed superintendent at Equinox Mill, Anderson, S. C., a subsidiary of West Point Mfg. Co. . . . Frank B. Williams, formerly vice-president in charge of industrial relations at the West Point, Ga., headquarters of the company, has been named agent of the plant at Lanett, Ala.

Robert S. Dempsey, until recently vice-president of Raycrest Mills at Pawtucket, R. I., has become associated with Monsanto Chemical Co. as New York manager of sales and development of its textile chemicals department. He will be located at Monsanto's new offices in New York City at 445 Park Avenue.

Gustave Treffeisen has been appointed sales manager of the Alemite distribution division of Stewart-Warner Corp., succeeding Charles I. Kraus.

A New and Needed Industry in the Textile South

Manufacturing
TENTER CHAINS AND GUIDER SPECIALTIES

Repairing
ALL TYPES TENTER CLIPS

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VOGEL No. 14 SOUTHERN OUTFIT

A durable, economical closet for Mills, Factories and all types of industrial installation

When installing No. 14 closet trap must be set directly under bowl.

The Vogel No. 14 has a vitreous china top supply bowl, heavy flush valve, reinforced hardwood seat, painted white enameled drum shaped tank and union ell flush connection.

(The Number 14 is not frost-proof)

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VOGEL PATENTED **PRODUCTS**

Houghton Wool Tops

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SUITABLE FOR BLENDS WITH RAYON OR COTTON

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40 Years of Friendly Service

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QUALITY • UNIFORMITY
SERVICE

For the Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Keller Tool Produces Roll Scrubbing Machine

A new pneumatic roll scrubbing machine for cleaning steel rolls of cotton spinning machinery is announced by the manufacturer, Keller Tool Co. of Grand Haven, Mich. The new power tool is equipped with wire brushes which sweep down between flutes and quickly remove oily, matted cotton. When cleaning with the tool, rolls may be left in the spinning frame, if desired. Power from the spinning machine rotates rolls slowly while brushes are removing the objectionable material between the flutes. Rotary air motor which powers the scrubbing unit is adjustable to any desired operating speed.

Crane Arm Attachment For Power Fork Trucks

Lewis-Shepard Products, Inc., announces the availability of a new crane arm attachment to fit all models of its power fork trucks. Constructed of tubular steel, this crane arm has a minimum length of 24 inches. It is built, in standard models and in increments of six inches to a maximum length of 72 inches. Longer lengths may be obtained upon request. Easy to mount as a pair of forks, this latest Lewis-Shepard feature can be mounted between two forks and may be operated as a separate unit or in combination with the forks. Material to be handled with the crane arm is picked up with a sling attached to this rugged crane hook. After the load is secure it can be moved by the crane arm or placed on a pallet or skid platform for transportation by means of the forks. The simple operation of this new crane arm attachment permits the operator to reach into vats, gondola cars, and presses, and to handle warp beams in and out of looms. Many other uses for this attachment will be apparent or can be derived by users in specialized industries. As a general maintenance tool for example in many mills, factories and plants it will be of invaluable assistance. Full information can be obtained by writing Lewis-Shepard Products, Inc., 301 Walnut Street, Watertown 72, Mass.

General Dyestuff Has Eight New Circulars

General Dyestuff Corp. announces the release of the following new circulars: G-472 — *Rapidogen Blue R,* G-483 — *Chromindigen Blue BRA Conc. CF,* G-484 — *Rapidogen Bordeaux RN,* G-486—*Rapid Fast Brown IRH Powder,* G-487 — *Palatine Fast Blue 5 RNA-CF,* GDC-276—*Coveral AS,* G-480 — *Nekal NF,* G-488 — *Eulysine A in the Textile Industry.* They may be secured by addressing the firm at 435 Hudson Street, New York 14, N. Y.

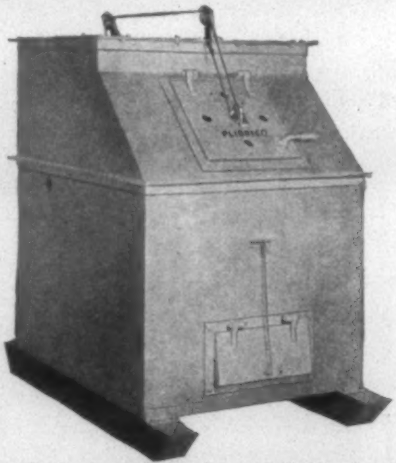
Hunt Machine Works, Inc., Is Formed In Greenville

Hunt Machine Works, Inc., is the new corporate name of Mountain City Foundry and Machine Co., 72-year-old textile machinery manufacturing plant, and Hunt Loom Co., builder of weave room machinery and equipment, following a merger recently of the two into a $2,000,000 corporation. The increase in capitalization will be for the purpose of expanding and consolidating operations of the two former companies in the plant at 200 Academy Street, Greenville, S. C.

William Earle Henderson has resign as a vice-president of the South Carolina National bank to become secretary-treasurer and a director of the new corporation. Officers besides Mr. Henderson will be John O. Hunt, president, and Yvonne B. Hunt, vice-president. Expnasion plans of the new firm include continuation of the present building program to more than double the floor space occupied in 1945, providing upward of 10,000 square feet for manufacturing operations alone. The new company will step up its production of textile machinery, including spreaders, motor drives, belt-driven flywheel drives, centrifugal pumps, hydraulic presses, kettles, rebuilt looms, weaving attachments and other precision equipment for cotton, rayon and woolen mills.

Portable Incinerator Introduced By Plibrico

Plibrico Jointless Firebrick Co., 1800 Kingsbury St., Chicago 14, Ill., has announced the development of a line of portable incinerators for the safe and easy disposal of all kinds of industrial and institutional refuse. The Plibrico portable incinerator is well suited to the needs of industrial plants and other establishments with a moderate amount of wet or dry refuse to dispose of. It eliminates the hazards of burning refuse in the open or the nuisance of hauling it away. The incinerator is made in three sizes, with grate widths of 24, 36 and 48 inches.



It is a steel-cased unit, finished in aluminus paint, shipped complete and ready to operate when connected to a suitable stack or breeching. It is readily portable and may be moved from place to place as changing conditions require. The incinerator is lined with Plicast L-W-I lightweight, insulating refractory material. This lining heats up quickly to insure rapid and complete combustion, and its insulating value is important in indoor installations. A steel stack of the proper height and

Fast & Effective

DISINFECTANT-DEODORANT

Kills

many putrefactive bacteria which cause disgusting odors . . .

Replaces

disagreeable smells with fresh, pleasant tang of eucalyptus.

Use F & E in and around toilets, urinals; for flushing garbage receptacles, commodes; for washing down dressing room benches . . . wherever thorough, effective deodorizing is imperative.

Write for Folder FE-F745 today.

F & E SOLUTION

The C. B. DOLGE CO.
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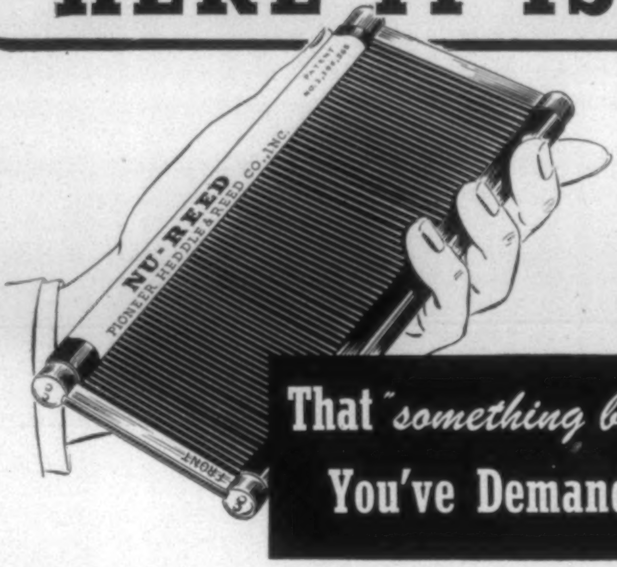
NU-REED
PIONEER HEDDLE & REED CO., INC.
FRONT

That *"something better"* You've Demanded

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- FRAMES
- FRAME PARTS
- REEDS FOR ALL WEAVES
- COMBS OF ALL DESCRIPTIONS
- COTTON LOOM HARNESS
- MAIL EYE HARNESS
- SELVAGES

For years, mills have demanded a *better* reed. PIONEER has produced it. Not in theory. The NU-REED is now *at work*—in many weaving mills; on rayon, cotton and light duck. Why is it better?

It is stronger; made of wider wire; its dents are more resilient and durable; its construction doesn't throw the loom out of alignment. In short, it stands punishment at the high speed of present-day demand, under the severest usage.

Also . . . the NU-REED allows 15 to 20 per cent more weaving space than the standard reed—it is ideal on difficult weaves. Our representatives are trained in mill practice; they can *show* you its undoubted advantages. Be sure you get a demonstration.

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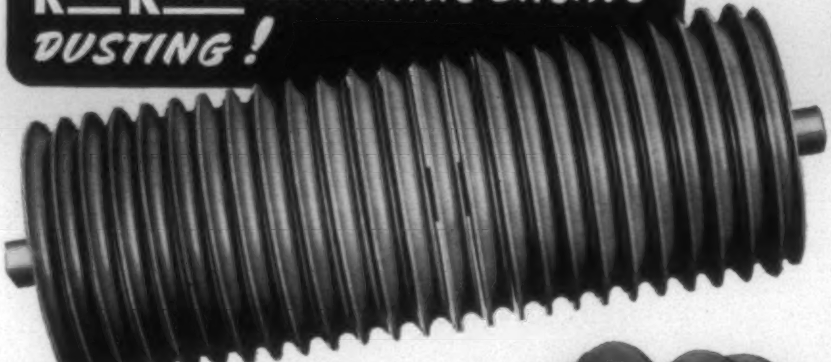
diameter can be furnished as optional equipment, and an auxiliary gas burner is available for use where a large proportion of wet refuse is to be burned. The incinerator includes many important design refinements that are completely discussed in an informative bulletin prepared by the manufacturer.

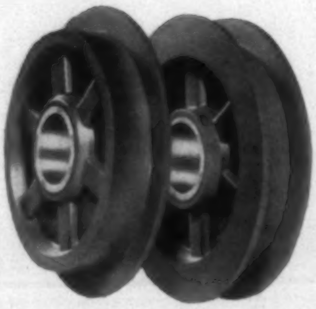
Textile Plant Sanitation Discussed In Report

Cleanliness being one of the major maintenance problems of the textile industry, textile plants will be interested in a recent report on a product that simplifies cleaning and eliminates many of the hazards of solvent cleaners. Penetone Senior has won the approval of insurance companies and textile firms which are interested in safe, efficient degreasing of floors, equipment and general plant facilities. Senior is entirely non-inflammable and non-toxic; contains no abrasives or caustics. The emulsifying properties of Senior are especially well suited to the oils and greases found in textile plants. Regular manitenance of floors and equipment with Senior keeps them in grease-free condition and leaves a surface which is non-slippery and entirely without film. It also has the advantage of eliminating the need for many specialized cleaners because the one product can be used for virtually every cleaning job in the plant. Copies of the field service report are available to all interested manufacturers who address the Penetone Co., Tenafly, N. J.

Duriron Products Are Described In Bulletin

A complete 12-page manual on the corrosion resistance, proper installation and use of Duriron acidproof sinks, sink strainers, traps, and sanitary pipe and fittings has just been issued by the Duriron Co., Inc. It will be of interest to all who must handle corrosive wastes. A 12-page data bulletin, known as Price List H, has also been issued. It lists all items available for prompt delivery. Both manual and bulletin will be mailed to anyone who writes to the Duriron Co., Inc., Dayton 1, Ohio, and asks for Bulletin 703.





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The manufacturer announced Aug. 1 a greatly improved model, increasing the weight only 1¼ pounds, that will hold its heat three times as long. A maximum weight of 13¼ pounds makes the device easy to carry any where especially since it is used principally when not connected to any electrical cord. Mothproofing a clothes closet, effectively, without removing any garments, in two seconds, for 30 to 60 days is typical of the many amazing insect control measures claimed for

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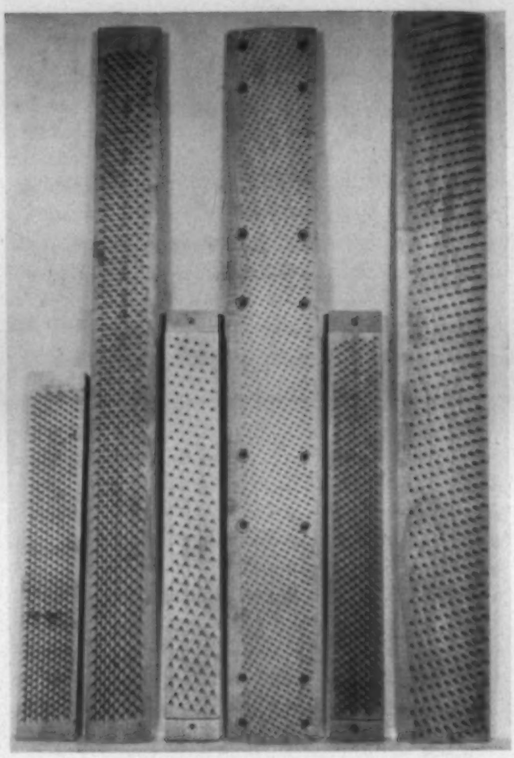

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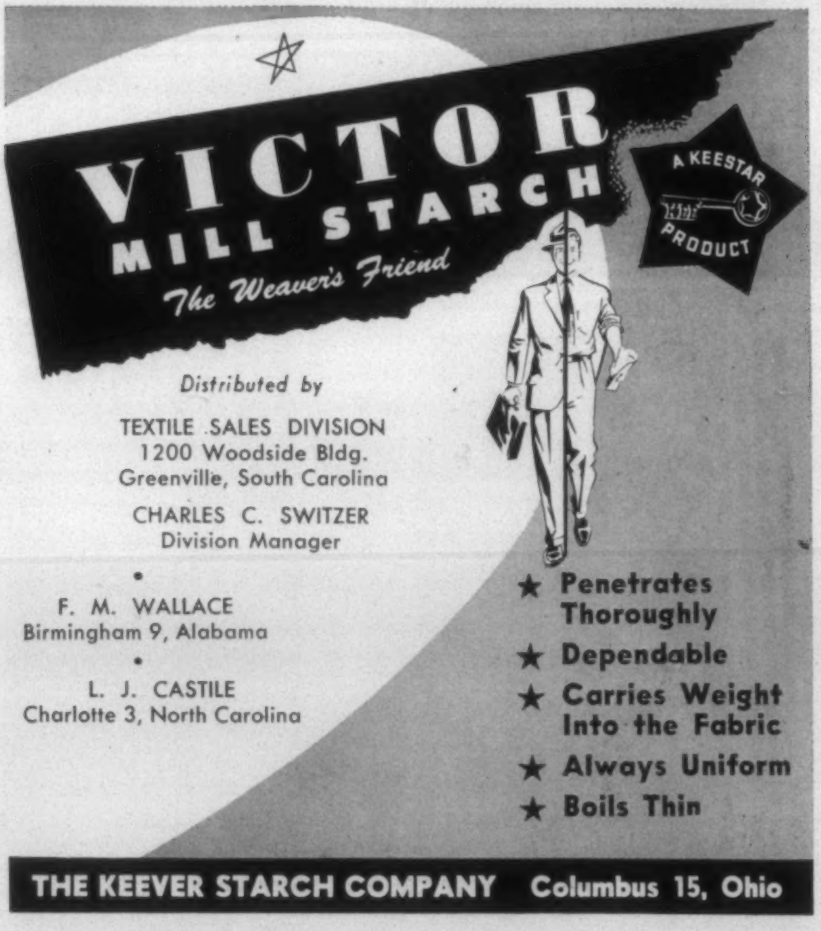
by the device. Described as a positive instant killer of all insects, the 92 per cent kill on roaches and water bugs on one treatment has proven a conservative claim. The Southern distributor, R. H. Russell, 312 East Morehead Street, Charlotte, N. C., will furnish for your reference a list of textile mills now using this equipment or any additional detailed information desired.

Slide-Rule Simplifies Flow Rate Calculations

The new Foxboro Flow-Rule is a specially designed 12-inch slide rule for computing orifice plate bores, flow nozzles or Venturi throats, and also the rate of flow, or the differential created across the orifice plate (whether flange tapped or full flow tapped) or other primary device. It can be used for all fluids, with or without seals, and covers such a wide range of flows and line sizes that it will handle almost any commercial problem. Although its average error is well within the accuracy of flow test data, it is not intended to replace computation methods where purchase and sale of fluids are involved. It will, however, be found to be invaluable for checking such calculations.

The cost of the rule may easily be saved, many times over, where the correct determination of line size or flow rate is important. The great saving of time which the rule affords will be appreciated by all users. In a recent test demonstration before a group of industrial engineers the rule gave results in two minutes which, by the ordinary procedure would have taken from about 20 to 45 minutes, involving the use of curves, tables and a calculating machine. The accuracy of the Flow-Rule is closer than can be read without a magnifying glass. Use of a Flow-Rule will be quickly understood by anyone familiar with a slide rule. All necessary instructions are on the back. The reversible slide has scales for gas on one side and liquids and steam on the other side. The use of color to distinguish the scales for such fluids adds to the instrument's convenience. Other color bands are shown, with tick marks indicating the I. D. of Schedule 30, 40, 80 and 120 pipe.

Preliminary work in developing the Flow-Rule extended over several years and included the accumulation of suggestions from many industrial concerns. It is made for the Foxboro Co. by Cox & Stevens Aircraft Corp., which developed the scale rules used in operation-calculations for the B-29 bombers. The Flow-Rule is expertly constructed on moisture-proof plastic, free from effects of warpage or thermal contraction or expansion. Its solid construction eliminates any need or adjustment for clearance or alignment. The slide works easily, without slop or excessive friction. Scales line up without parallax, and are on a white vinylite with a clear plastic covering which protects scale markings. The Flow-Rule comes in a case of heavy leather, equipped with a plastic window for the owner's card. Immediate delivery is assured while the limited supply lasts. Checks or formal purchase order may be sent to the Foxboro Co., Book Department, Foxboro, Mass.



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Factory Planning, Layout Is Described In Report

Clean, convenient and safe surroundings for employees can often be as important to the over-all efficiency of a plant as finding the correct spot for production equipment. This fact governed the approach to the latest management study conducted by the Policyholders Service Bureau, Metropolitan Life Insurance Co. Results of the study have just been published in a report, *Factory Planning and Layout.*

Designed to assist executives of Metropolitan Group-insured companies in planning towards the best possible results in operating efficiency and good working conditions the report is written from an industrial relations rather than an engineering viewpoint. The methods suggested can be used in studying minor re-arrangements within an existing plant in order to improve working conditions, as well as in planning the layout of a new plant to provide a good place to work. Among the subjects covered are the factors affecting factory planning and layout; the data needed in planning; space requirements; allocation of area; building types; location; building facilities required; and moving machinery and equipment.

Factory Planning and Layout is one of a series of Metropolitan planning reports designed to help executives obtain the maximum benefits of good working conditions. Other reports in the series are *Office Planning and Layout, Lunchrooms for Employees,* and *Washroom and Locker-Room Facilities.* There is a limited supply of the report. Copies are available to executives who request them on their business stationary. Address: Policyholders Service Bureau, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.

Durable Moire Finish Announced By Cyanamid

A durable moire finish which is not affected by water spotting or by wet cleaning by dry cleaners has been developed by the textile resin department of American Cyanamid Co. The finish is a thermosetting resin which is heat-cured so that the moire effect becomes permanently a part of the fabric. The new moire finish is so durable that applied to all-rayon or rayon and cotton bengalines it may even be laundered without injuring the moire effect. The finish also imparts crease resistance, stabilizes the goods against dimensional changes and gives a full rich hand to the fabric. Complaints have been so numerous in respect to some present types of non-durable moire finishes that dry cleaners have been alerted against losses from such damage claims, according to the textile resin department. The National Retail Dry Goods Association has also warned retailers about "fugitive" moire finishes. Cyanamid's durable moire finish is applied by passing the goods through a bath containing the thermosetting resins in solution and drying the fabric at a low temperature before embossing. After the moire effect has been applied on the calendar the goods are cured so that the effect becomes permanently a part of the fabric.

Two Solvay Branches Acquire New Quarters

Solvay Sales Corp., New York City, has announced that the New Orleans and Houston branch offices have moved into new quarters in their respective cities. The New Orleans branch is now lcoated at 1107 Pere Marquette Building, Baronne Street, New Orleans, La., and the Houston office of the firm is now established at 1313 City National Bank Building, 921 Main Street, Houston, Tex. The telephone numbers of both branch offices remain unchanged.

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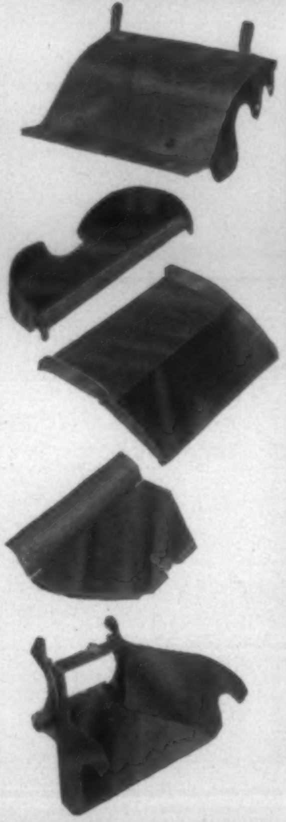

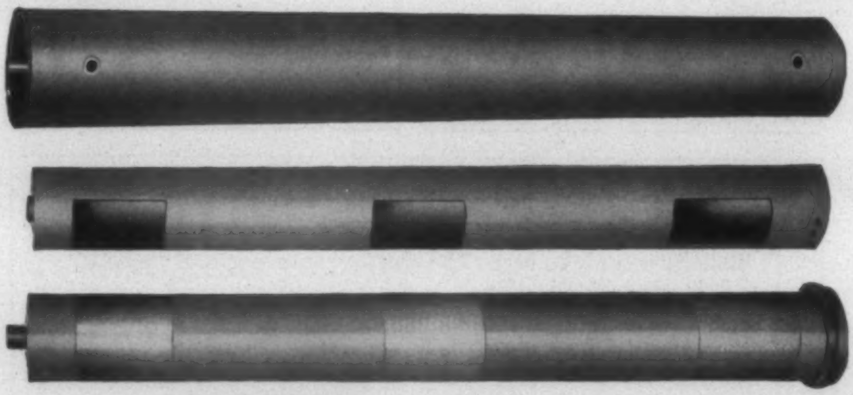

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WANTED—Position as General Overseer. Experienced on carding, spinning, twisting, winding and finishing. Prefer Alabama or vicinity. Employed. Address "Alabama," care Textile Bulletin, P. O. Box 1225. Charlotte 1, N. C.

CARDROOM Second Hand with years of experience with big mill would like to make change. Can manage help. Sober; no bad habits. Now employed. Can give good references. Write "Cardroom," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as Clothroom Overseer. 26 years' experience; employed at present, but wish to make change. Sober, good habits. Good references. Write "D. C. C.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as Superintendent of Yarn Mill. Thoroughly experienced in this type of work. Practical executive and good manager of employees. Can get production and quality; good references furnished. Write "Yarn," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Card grinder wants to make change. Can fix pickers, drawing flyer frames; splice rope; do belt work. Thoroughly experienced on cards. Have family and good references. Write "Rope," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as Cloth Room Overseer. 20 years' experience on all grades of cloth. 49 years of age, married, but have no family. Good health. Good manager of help. Best of references furnished. Write "M. M. M.," care Textile Bulletin, P. O. Box 1225, Charlotte, N. C.

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Leather V-belting which can be cut from a roll and spliced to fit any required centers is now available from the Chas. A. Schieren Co., 30 Ferry Street, New York City. This V-belt is made in A, B, C and D sections and is supplied in 100-foot rolls, packed in boxes. The belt is constructed in such a way that the side walls are of flat, full grain leather which provides greater pulley gripping capacity. The belt can be made endless, to fit any drive, either by a lapped splice or by mechanical fasteners. By using a lap press and tension rods and clamps, which are also available from Chas. A. Schieren Co., the belt can be installed endless under any desired tension directly in the grooves on the drive. This saves tearing down drives that have outboard bearings. The Schieren E-Z Lap Cutter, a mistake-proof belt chopping device, also supplied by the company, enables anyone to splice a leather V-belt to factory perfection. It cuts the leather on the bias across the belt, making a long, tapering, slant-wise cut, producing the fine feather edge on the ends so necessary to a smooth-running endless belt joint.

Wool Shrinkage Labeling Is Discussed

Government aid in formulating trade practice rules to govern advertising and labeling of wool fabric shrinkage control substances and processes was formally requested Aug. 5 by industry representatives at a meeting in Washington with Henry Miller, director of the Federal Trade Commission's trade practice conferences and Wool Labeling Act administrator.

Shortly after Mr. Miller opened the Washington meeting, F. Eugene Ackerman, executive director of the American Wool Council, explained why the industry was anxious to clarify terminology used in representing shrinkage and substances. "Interest and activity in the promotion and usage of shrinkage control by treating wool, wool top, yarns and wool cloth is increasing constantly," he stated. "At least 36 different processes are being offered and promoted with the avowed purpose of making wool in its various forms shrink-resistant and washable in varying degrees." Pointing out that claims now being made for the different processes often are unwarranted and overzealous, he said, "In too many instances the imagination of the copywriter has outdistanced the sober results of the technician. As a result, manufacturers, retail merchants and the public have become confused." Mr. Ackerman stated bluntly that there is yet no process which can render wool or any wool product shrinkproof. "This absolute term should be banished in any honest description of any of the processes now being offered on the market," he continued. "Only a limited number of fabric constructions have yet been successfully processed for shrink control. The finer the fabric in terms of quality of wool, construction and finish, the less successful to date are shrink-resistant processes."

Refuting many of Mr. Ackerman's statements and differing sharply with a large majority of those present at the F. T. C. session were Hugh Lawton, vice-president of York Knitting Mills, Toronto, Can., and Richard E. Sumner, manager of American Cyanamid Co.'s resin department. Mr. Lawton insisted that his firm now has the rights to a process that will absolutely prevent any shrinkage of wool fabrics, contending that the process reduces the felting power of natural wool fibers to zero. "Fabrics and garments made from it will not shrink," he asserted. "They can be dyed like ordinary wool with no damage to color fastness. There is no increase in weight, no foreign substance is added and no residue remains. Nothing is there but pure wool." He added that his firm had asked better business bureaus in the United States to test his claims for the shrinkage control process.

Mr. Sumner said his firm's Lanaset resin treatment and many other present-day chemical finishes constitute an entirely new approach to textile finishing. "Until recent years," he explained, "the purpose of almost all finishing was to improve the appearance or hand of the fabric. But most new chemical finishes have as their primary purpose the improvement of the use and service characteristics of the fabric for the benefit of the consumer. We believe that during the next five years there will be general acceptance of wool shrinkage control for many types and price ranges of apparel, and for substantial qualities of yarn goods. As emphasis shifts from development to sales, we are concerned that standard definitions be accepted by the producers of finishes and by the textile industry to avoid confusing re-

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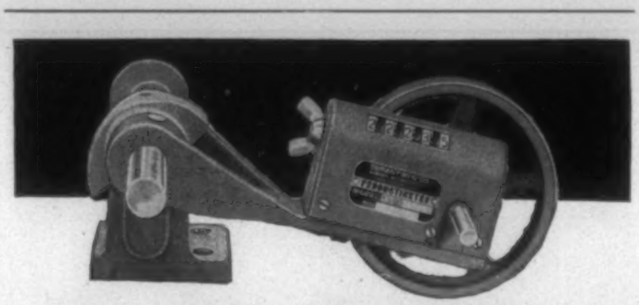
tailers or the confusing public." The only safe policy, Mr. Sumner concluded, is that of conservative claims. In the interest of orderly marketing, he advocated development of a definite program to serve as a guide for manufacturers.

Speaking from the standpoint of the mill executives were Rinaldo A. Lukens of Continental Mills, Inc., F. R. Haigh of Botany Mills, Inc., and Hugh Christison of Arlington Mills. Mr. Lukens expressed the hope that F. T. C. would not attempt to eliminate wool shrinkage altogether, legislatively or otherwise. "The felting property of wool fiber is one of its most valuable attributes," he said, "and not one we should want to eliminate." Mr. Haigh stated that the issue is whether a wool garment is washable, not whether the wool is shrinkproof. Terminology approved by F. T. C., he declared, should be directed to washability, not shrink-resistance, the latter being only part of the washability question. Mr. Christison briefly discussed whether F. T. C. should require fabric labels to disclose how much resin has been used as a bar to shrinkage. Resin often adds as much as ten to 15 per cent to the weight of the fabric, he remarked, and cautioned F. T. C. that unscrupulous manufacturers, unless checked by the rules F. T. C. will promulgate on this score, will fill up the wool cloth with resin or cheap substitutes—baked into the fiber. Instead of serving as a control for shrinkage, these would then be mere adulterants, he said. Mr. Christison advocated the labeling of resin content under the Wool Products Labeling Act to avoid such misrepresentation.

Milton Harris of Harris Research Laboratories called on F. T. C. to help the industries decide what to do about tolerance, pointing out that while a shrinkage of five per cent in a pair of wool socks would not be particularly serious, it would be disastrous in the neckband of a shirt or similar garment. "Furthermore," he added, "there is no point in having a shrink-resistant process for a garment that will damage the wool."

At this point Dr. D. H. Powers of Monsanto Chemical Co. advised Mr. Miller and F. T. C. that there is no such thing as shrinkproof, shrink-resistant or unshrinkable with reference to wool fabrics. "Our problem is to avoid using those terms," Dr. Powers said. "Felting plays a tremendous part in processing and finishing wool. When we eliminate the felting, we improve that fabric from a shrinkage standpoint, but not necessarily its washability."

Speaking for the office of the Quartermaster General, Dr. Stephen J. Kennedy, research director for textiles, clothing and footwear in that Quartermaster division, reported that because Army wool items, particularly socks, failed to withstand shrinkage under field conditions, QM undertook a special research program in 1943. "In this research, several things have stood out as especially clear," he pointed out. "One is that the over-all problem of wool shrinkage control is complex. A solution for one item is not necessarily a solution for another. And a process which will give the desired results on one type of item does not necessarily provide the answer for other items. Another point is that standards of performance and test methods are not easy to set up." He stated that it would be "most disheartening" for consumers to be told that an item is shrinkproof when, in fact, it had to be hand-washed in lukewarm water or the



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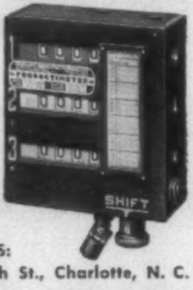

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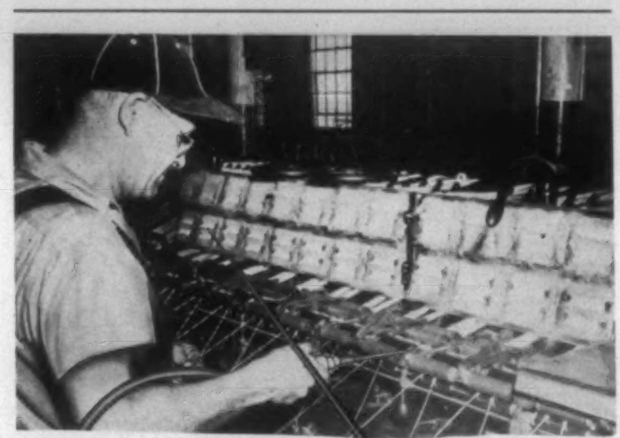
treatment did not last the life of the article. "For such treatments, any claims made with respect to shrink resistance should be very mildly stated and only minor claims should be permitted," Dr. Kennedy suggested that terminology should be explicit as to just what performance can be achieved, even if this means that the terms shrinkproof or shrink-resistance are not permitted on items having such slight shrinkage-resistant qualities.

A. A. T. C. C. To Intensify Ageing Study

The Committee of Ageing of Textiles of the American Association of Textile Chemists and Colorists plans to broaden its scope to include work on the deterioration of textile fibers exposed to light. In announcing this decision, J. D. Dean of the Southern Regional Research Laboratory, U. S. Department of Agriculture, and chairman of the A. A. T. C. C. committee, pointed out that the two fields of investigation have much in common. At present, research on ageing of textiles is being carried out in several laboratories, but no detailed account of the results has been made available as yet.



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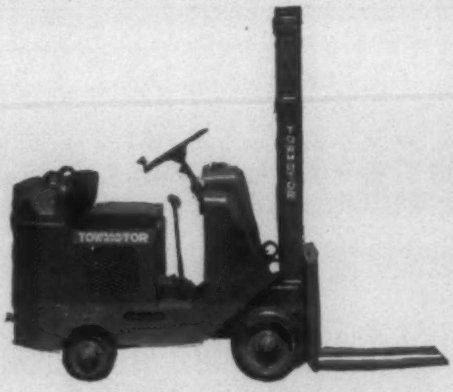
Wrinkle-Resistant Finish For Cottons

George S. Harris, president of Dan River Mills, Inc., Danville, Va., disclosed last month the development of a finish to make cotton goods wrinkle-resistant. Hailed as the greatest chemical development in the cotton industry since the adoption of shrinkage control and vat dyeing processes more than 15 years ago, the wrinkle-resistant finish will create extensive new uses for cotton in the men's and women's clothing apparel field, Mr. Harris told a press conference in New York City.

The process was developed after four years of intensive research at Dan River's laboratories. For the last two years, the work was conducted in collaboration with the Monsanto Chemical Co. Basis of the finish is Monsanto's Resloom, a synthetic resin formula which previously has been applied successfully to woolen fabrics so as to make them washable. Mr. Harris' announcement was the first that Resloom C had been applied successfully to cotton to achieve a wrinkle-resistant finish.

Mr. Harris said that test runs with several hundred thousands of yards of cotton fabrics were made before a successful method of application was achieved. The tests were made under varying degrees of temperature and tensions. Fabrics tested included cotton chambrays, ginghams, Gordon Plaid shirtings and cotton tweeds. The official said that not all fabrics had responded alike to the treatment and that development work was still going on to "perfect our methods of application so that the finish can be applied equally successfully to all, or most, types of cotton goods."

He added that commercial production of wrinkle-resistant fabrics was now under way but that it would be "restricted to a very narrow volume" until these technological problems were solved. The Dan River president said the new finish marked the third and perhaps final step in the cotton industry's prolonged attempt to achieve an all-purpose fabric. "The first two steps were completed when cotton became shrinkproof and color-fast," he said. "By providing a



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wrinkle-resistant characteristic, the new finish now creates a worsted effect on certain cotton fabrics, opening up an entirely new field of end uses for cotton. Men's and women's suitings, uniforms and sports shirtings are some of the new items that may be expected from this development."

The development was the second major chemical achievement Dan River has contributed to the textile industry within five years. Its Fiber Bonded process, by means of which yarns, threads and rovings are treated with a synthetic resin bonding agent to give them far greater tensile strength, is now being licensed to commercial and industrial users throughout the world.

New Identification System For Resloom

A new system of identification to distinguish the different formulations of Resloom has been announced by Dr. D. H. Powers, director of the textile chemicals department of Monsanto Chemical Co. Resloom is the established trade name for the company's series of melamine resins. Each type of fabric requires a different member of the series.

This textile chemical was first introduced to make rayons crush resistant. Now, a new formulation makes woolens washable. Development work is progressing on a third variation which will provide important improvements to cotton. In brief, Resloom is the basic product, but, there are three differentiations in formula to accomplish three different functions.

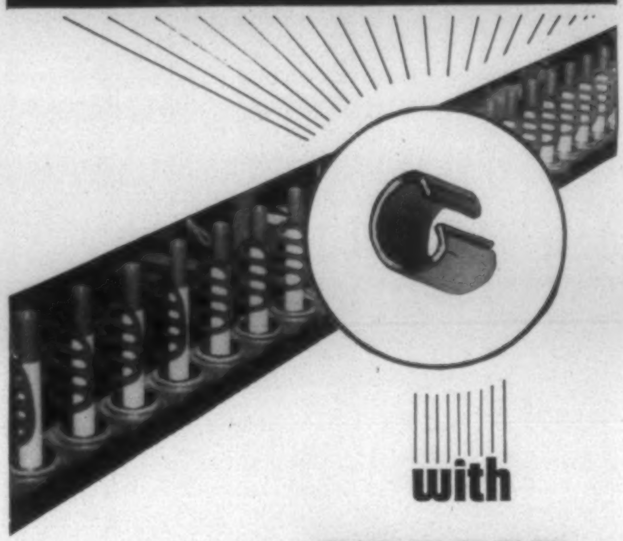
The company decided, Mr. Powers said, that it would be less confusing, less troublesome and more convenient to retain the one basic name, Resloom, already widely-known, and add to it sub-titles for each application. Thus, Monsanto now has Resloom—Formula R for crush-resistant rayon, Resloom — Formula W for washable wool, and Resloom—Formula C for wrinkle-resistant cotton.

The name Resloom will continue to indicate, says the firm, lasting character and greater performance for wool, cotton, rayon. "We believe this simplifying decision will prove advantageous and helpful," Dr. Powers concluded.

Bedding Tested For Flame Resistance

Ignition of the mattress is the chief danger from cigarettes on bedding, according to the National Bureau of Standards, which recently completed a series of tests on making bedding materials flame resistant. The study was undertaken at the request of the Federal Public Housing Authority and was conducted under the direction of Marjorie W. Sandholzer, chemist in the bureau's fire protection section. Impregnation of the ticking and surface of the cotton filling with a borax-boric acid flameproofing solution appears to provide adequate protection against a burning cigarette, the tests revealed. A much deeper penetration of the solution into the mattress was found to be necessary, however, to protect it from a flaming source of ignition.

Cigarette tests were made on both the mattresses and blankets. The lighted cigarette was placed directly on the mattress and between the folds of the blanket with three layers of cloth on top and three underneath. The hazard from a smoldering cigarette on an untreated blanket of 25 per cent cotton and 75 per cent wool did not appear to be serious, in fact, no significant difference was noted between treated and untreated blankets. Tests were made on the



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spread of fire in untreated sheets used over a treated mattress. With one untreated sheet spread smoothly over the mattress and another rumpled and bunched over the first, it proved relatively difficult to ignite the sheets from a glowing cigarette. Charring occurred, but the glow died out without producing flame. The sheet was caused to burst into flame by bunching 15 layers over the lighted cigarette and allowing it to smolder for half an hour, a condition not likely to occur in ordinary use. The bureau concluded that the treatment gives promise of reasonable retention under wear, and the protection afforded seems sufficient to warrant the work and expense of treating mattresses.

Tablecloths Now Getting Resin Treatment

The plastics division of Monsanto Chemical Co. reported last month that a substantial amount of the current production of cotton print tablecloths is now being coated with its vinyl butyral plastic, long used as an interlayer material in safety glass and introduced less than a year ago as a consumer goods textile proofing agent. Six major tablecloth manufacturers are using the product, which, with very little change in feel or appearance and with marked accentuation of color brilliance, imparts almost complete resistance to stains and soiling.

Monsanto reports that the product is gradually being channeled into new fields, among them fabrics for slip covers, draperies, curtains, shelf liners, aprons, children's bibs, mattress covers, garden furniture covers, sail covers, beach bags and umbrellas.

The coated cloth continues to have most of the eye and touch appeal of a normal fabric, yet it loses none of the functional properties of a coated textile. In the mill application process, there is bonded to the fabric a super-thin, almost invisible coating of flexible and transparent vinyl butyral—so tightly adhering that it will not chip or peel under normal usage and so inconspicuous that only an expert can visually distinguish a properly coated cloth from an untreated companion cloth. To the claimed advantages of normal appearance and easy cleanability are added improved resistance to abrasion, longer wear, increased color fastness and a lessened tendency to stretch or shrink. The coated fabrics will stand up under repeated mild launderings, should this be deemed necessary, and can be pressed on the untreated side with a moderate iron. They cannot be dry cleaned.

Scientists of Monsanto and the Hodgman Rubber Co. developed the textile coating application during the war, after Pearl Harbor had left the country with inadequate natural rubber supplies and cutbacks in auto production had left the company with a surplus capacity for production of vinyl butyral. Process methods have since undergone continuing refinements, directed mainly toward imparting waterproofness and stain resistance with minimum change in feel, texture and appearance.

German Process Speeds Rayon Yarn Output

The time required to produce rayon hosiery yarn can be cut from 60 hours to two minutes 15 seconds by the automatic Dureta process, according to a German textile manufacturing plant. The process is described in a report for sale by the Office of Technical Services, Department of Commerce. The report, obtained and translated by American investigators in Germany, has a supplement containing seven photographs of Dureta yarn production. Fabrication of hosiery rayon on the Dureta machine, developed in the Bemberg-Wuppertal plant at Dormagen, is said to have many advantages. Yarn output is increased by the time-saving features of the automatic continuous process. The yarn, untouched by hand during the entire process, is of high uniform quality with good tenacity and elongation.

The machine in use at Dormagen has 204 spinning funnels, corresponding to half a spinning machine. The one difference is that the spinning funnels are not in one plane but in three rows of 68 funnels per row. When processing begins, the threads from each row are guided through a dilute sulfuric acid bath and then over two sets of glass rolls, one set on top and the other under the machine. The usual winding process is dispensed with and the threads are then passed through a wringer to remove the acid. The threads pass automatically to the washing zone where copper and the last traces of acid are removed by two systems of 24 pairs of rolls and a counter-current of water. After passing through a wringer which leaves a uniform amount of adhering moisture, the threads are run over a felt-covered roll running in an oil preparation. After being wrung through another wringer, the threads pass automatically to the dryer. The drying apparatus has three drives for regulating the speed in each of three compartments in order to allow for shrinkage. When dried, the threads are subjected to the vapors of a water bath to gain an 11 per cent moisture content. The threads are then twisted, wound on bobbins and rewound on cones.

Bemberg-Wuppertal found the Dureta machine at Dormagen expensive to operate and maintain, but considered that improvements in the process would revolutionize yarn production.

Japan's Silk Industry Is Defrosted

Supreme Allied Headquarters in Tokyo last month transferred to the Japanese government control over the nation's silk, which was frozen Sept. 1, 1945. Japan is estimated to have 100,000 bales of raw silk and more than 100,000,000 yards of silk fabrics. All Japanese silk stocks were frozen after the occupation on the grounds that it comprised export assets. Meanwhile, some has been released for export and some for domestic consumption.

Cotton Fabric Exports Make Gains

Exports of manufactured cotton products, including fabrics, more than doubled in June over the same month last year, the Department of Commerce reported last month.

Total exports of cotton manufactures came to $67,000,000, as compared with $29,400,000 in June, 1946. Cotton fabrics totaled $46,700,000, against $18,500,000 a year ago;

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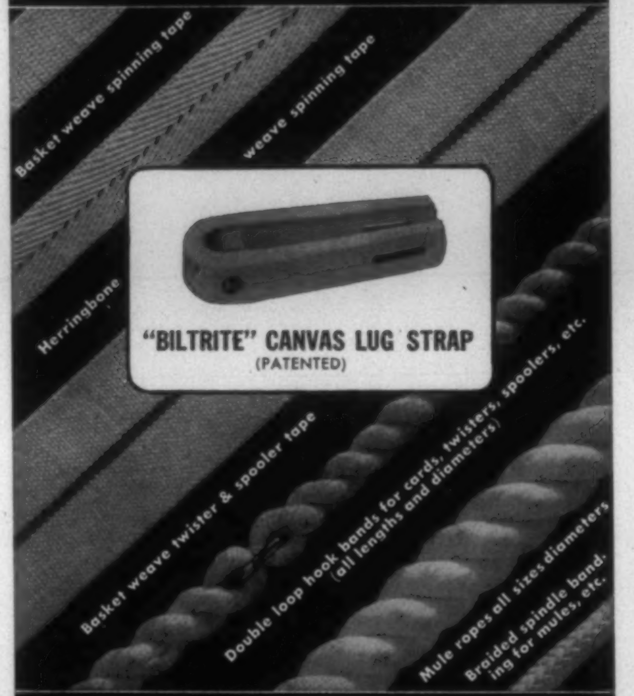
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this was the equivalent of 125,206,000 square yards against 68,310,000 square yards.

In contrast, wool manufactures shipped abroad took a sharp drop in June. About $4,900,000 worth of wool goods was shipped, compared with $7,500,000 in June, 1946.

Exports of rayon, nylon and other synthetic textile manufactures continued to show sharp gains over June a year ago. About $12,900,000 was exported last June, compared with the previous June's $12,500,000.

Wool manufactures imported into this country in June totaled $2,400,000, a slight gain over a year ago when imports amount to $2,300,000.

Exports of cotton fabrics, including mixtures, may hit a peak of 1,500,000 square yards this year if the current average export rate holds up through the balance of the year, the Agriculture Department reported recently in a summary of the cotton situation. At the same time, domestic demand for cotton textiles also was characterized as strong.

Cotton textile exports, said the Bureau of Agricultural Economics, totaled 727,500,000 yards in the first six months of this year, compared with 407,000,000 square yards in the first half of 1946.

"At this exceptional rate," the report continued, "exports during the first half of 1947 were equal to over 90 per cent of the total exported in 1946, and if continued at this average rate for the remainder of the 1947 calendar year, would approximate 1,500,000,000 yards."

The department noted that 1946 exports amounted to 775 million square yards, the highest volume since 1920. Annual export average for the 1941-1945 period was given as 577 million yards, while the average in 1934-1938 amounted to 234 million yards.

American cotton mills last year cornered 40 per cent of the world's cotton cloth export business, it was said. In the 1940-1944 period, United States mills claimed about 25 per cent of the world market; in 1934-1938, when world exports were considerably higher, the American share of this market amounted to less than five per cent.

Discussing the domestic outlook, B. A. E. said: "Through mill consumption of cotton during the 1946-1947 season will be about ten million bales, demand for cotton textiles at the retail level continues comparatively firm at prices much above pre-war levels.

"Total cloth production in 1946 was slightly over nine billion yards, or 7.5 per cent higher than the average of the years 1937 and 1939. The annual rate had increased to near ten billion yards for the first quarter of 1947.

"The 1947 first quarter rate of production for specialty fabrics was 47 per cent higher than in 1937-1939. Output of narrow sheeting and allied coarse and medium yarn fabrics, used mainly for non-apparel and work clothing, was almost 50 per cent higher than in 1937-1939.

"In contrast with the rise of ten per cent in unfinished or gray cotton goods production, output of finished cotton cloth was 37 per cent higher in 1946 than in 1939. However, a large proportion of the increase consisted of non-apparel type fabrics, such as tobacco cloth, cheesecloth and gauze. The production of these three types of finished goods was 6½ times as great in 1946 as in 1939.

"The output of drills, twills and jeans, used for work clothing and industrial purposes, was one-third higher than in 1941, but the trend was downward during 1946 and for the first quarter of 1947. The production of prints, plain and fancy, used for housedresses and other volume apparel garments, in 1946 was ten per cent ahead of 1939, and the production of broadcloth, which is important for men's shirts, in 1946 was less than half that of 1939.

"Though the production of some types of cotton goods and finished cotton cloth was considerably higher in 1946 and the first quarter of 1947 than for the later pre-war years, the increase is relatively small compared with the rise in income payments. It is somewhat less than the increase in the index of income payments adjusted for the rise in general consumer prices which has been less than the rise in cotton textile prices.

"Even though many cotton textile items are becoming much more plentiful at retail outlets and rayon products are available in much larger quantities than before the war, the demand (although showing slight weakening for some items) has continued comparatively strong at the current high prices."

Woven Rayon Goods Output Climbs

Rayon broad woven goods production totaled 468 million yards in the second quarter of 1947, the Bureau of the Census has reported. This total is an increase of five million yards or one per cent over the production in the first quarter of 1947.

A total of 102,000 looms was in place on June 28, of which 94,000 were active on the first shift; 86,000 on the second shift; and 56,000 on the third shift. The 133 million loom hours operated during the second quarter were about the same as in the first quarter.

Total yarn consumed in these fabrics amounted to 130 million pounds. Of this total, 111 million pounds was filament and spun rayon yarn; five million pounds, cotton yarn; and 14 million pounds, other than rayon or cotton.

World Protection Sought For Designs

Formation of an organization to bring about international design protection was prophesied by Henry E. Stehli, Stehli & Co., Inc., who returned to New York City last month aboard the Queen Elizabeth. In company with Sylvan Gotshal, he had attended conferences on this subject with 40 textile experts in Paris under the sponsorship of the International Chamber of Commerce.

"Design protection," he said, "is one of the most important things in the textile industry. Just as the patent law has been responsible for the bringing out of many great inventions, so design protection will aid in producing

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greater progress in design in our field. One reason why France is so great in the field of design is because they have protection within their own country. Of course, there are cheats there, but they can be prosecuted."

He said that he and Mr. Gotshal would call a meeting of textile leaders here as soon as possible to discuss the workings of the proposed international law on designs. Mr. Gotshal said that present plans call for the matter to be taken up through the American Council of Style and Design, the Textile Distributors Institute and the National Federation of Textiles.

Mr. Gotshal said that at the meeting in Paris, a motion was made and passed to make the movement international. He said that Francois Hepp, French textile expert, was named chairman pro tem and that he and Mr. Stehli had been named assistants to carry on the fight in North and South America for design protection.

Mr. Stehli voiced the belief that design protection should be based on arbitration of disputes rather than by legal procedure. He said that efforts would be made to bring the proposed design ruling before the United Nations.

Textron Common Stock Pays $2.67

Consolidated net profit of Textron, Inc., and subsidiaries for the six months ended June 28, 1947, amounted to $2,841,000, after deducting earnings applicable to minority interests of $360,000 and after appropriation of $1,000,000 to reserve for contingencies, Royal Little, president, reports. Inventory write-downs charged to profit and loss during the period amounted to approximately $2,000,000. The amount of $2,841,000 is equal, after preferred dividends, to $2.67 per share on 1,017,856 shares of common stock outstanding on June 28, 1947.

Net sales for the six-month period amounted to $62,088,000, excluding inter-company and inter-divisional sales. Comparable figures for the first six months of 1946 are not available in view of the acquisition of Textron Southern, Inc., and Nashua Mfg. Co. during 1946.

Factors Influencing Color Judgment

There are many factors which are of importance in color matching. One factor is the color of the undyed material: for instance, wool may be considered to have in it naturally occurring dyestuffs which give raw wool a yellowish color. Another factor of interest is the difference between the result obtained by dyeing a material and by mixing different colored fibers. If a comparison is made between two samples, each of which contains the same amount of dye but one containing it in every fiber while the other contains twice as much dye in some fibers and none in others, it will be observed that the totally dyed sample is darker in color than the blended sample. Another factor which may vary with the individual is the ability to determine colors. Thus, about four per cent of men are color-blind to some degree. This means that some men can determine color differences more easily than others.

Another factor is that of the light source. In general, a good color match should match under both daylight and artificial or Tungsten light. Eye fatigue is an important factor. If one looks at a bright red sample for a period of time and then turns and looks at a white ceiling, the white ceiling will take on a spot similar in dimension to the red sample but of a complementary color, namely, green. The angular conditions of view of a sample are very important. Thus, in comparing two pieces of cloth, it is important to have the weave of the cloth oriented identically, as many times widely different colors are apparent with different angles of viewing and illumination.

The area viewed is important. Thus it is ordinarily easier to distinguish the small color differences if the two areas in juxtaposition are large.

It is also very important to have the two colors in juxtaposition as two colors separated by some space are very difficult to judge with any degree of refinement. Fluorescence is sometimes a problem, although most of the fast-to-light dyes are not fluorescent. A fluorescent sample will vary in apparent color more radically with change of illumination than will a non-fluorescent sample. The color may vary with moisture content. This is particularly troublesome when a dry standard is compared with a wet sample recently removed from the dyeing kettle.

Phototropism is also a factor in some cases. A phototropic sample can be made to change under the action of light and recover in the dark and the process repeated many times whereas a sample which has truly faded has changed its color in the presence of light and does not return to its original shade upon being stored in the dark.

These are some of the factors which plague a dyer in color matching. It is the skill in producing satisfactory color matches which makes his function so important to the successful operation of the textile mill.—From *Dyelines and Bylines,* Calco Chemical Division, American Cyanamid Co.

Industrial Rayon Corp. reports net earnings for the six months ended June 30, 1947, of $6,101,235, equal to $4.02 per share of common stock. This compares with $2.72 per share for the first half of 1946. Earnings for the first half of 1947 included income from the sale of patents equal to $.72 per share. In the first half of 1946 income received from this source amounted to $.28 per share.

Second quarter, 1947, earnings, exclusive of income from the sale of patents, amounted to $1.70 per common share. This compares with earnings, exclusive of income from the sale of patents, of $1.60 per common share for the first quarter of 1947, and $1.29 per share for the second quarter of 1946.

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Cotton Goods Market

A downward revision in some wide goods prices has been put into effect in the Worth Street cotton gray goods market, according to New York City sources. However, these prices still remain above the former O. P. A. ceiling levels.

Involved in these changes are some sateens, wide drills, broken twills. In anticipation of a small cotton crop report, commission organizations boosted their prices, it is pointed out in the trade. But when the actual report proved larger than they had planned on, and with raw cotton quotations off as a result, these houses were forced to revise their prices downward.

Several mills indicate that they are temporarily out of the market as far as first quarter print cloths are concerned. Demand for second quarter print cloths is not too strong, it is said, with what selling going on being accomplished on the basis of a dollar a pound. With mills not pushing these sales, and with some houses not even quoting for this period, what second quarter business that is being accomplished stems from buyers' insistence for goods, it is said.

Mill men assert that the move away from bag sheetings has been prompted by the reluctance and hesitancy shown by bag manufacturers about covering on their last quarter commitments long after most other sections of the trade have gone at least through the last quarter. It was pointed out that most sellers of Class C sheetings have been able to cover most of their last quarter goods with some completely sold up for this period.

Class C sheetings are being bought freely by the converting trades such as the rubber trades, industrial users and jobbers, it is reported. Fairly large quantities of these goods were sold for delivery through the first quarter although no mill has been pushing such sales as yet. Some mills estimated that about ten per cent of potential first quarter sheetings have been booked already.

Continued failure of the bag trade to come in and place orders for the fourth quarter has induced some mills to switch looms off the production of bag sheetings on to other, lighter weight, it was reported.

While this switching has not yet become widespread and probably will not be too great, it was pointed out that by the time some bag manufacturers decide to buy for last quarter they will find certain of their sources have dried up and moved into other, easier-to-sell fields.

A lot of unfilled orders for ducks are hanging over the market, one executive believes, and as soon as buyers are convinced that cotton is not going to drop or rise sharply, they will move in to place orders.

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Cotton Yarns Market

Trading in sale cotton yarns appears on the surface to proceed in routine fashion, but the recent government cotton forecast is said to have underlined some salient differences among large sources of better quality yarns, as to pricing and how far ahead to sell production.

It is indicated that in combed yarns, for example, leading sources of market supplies now enjoy greater monopoly than ever before, due principally to acquirement of spindles by integrators and increased preference so far this year for better yarns by many manufacturers, so as to help move their end-products into higher price brackets for wholesale and retail distribution.

Such conditions, it is explained, seem to foretell a situation later on when some yarn sources virtually could name their own prices, but this is declared unlikely to happen.

Export business for months has kept up a nice balance for a number of mills, as with this new outlet, plus their regular domestic business, they have been doing very well. Just now, with the exchange situation upset and export buyers pressing for lower prices, this end of distribution is not the factor it has been up to date. Some export business is going on steadily, but it does not represent the aggregate volume previously and it is being concluded with more difficulty, both as to detail and prices.

The Bureau of the Census has reported that according to preliminary figures 23,832,156 cotton system spindles were in place in the United States on July 31, 1947, of which 21,415,434 were consuming cotton the last working day of the month, compared with 21,324,316 in June, 1947, and 21,578,390 in July, 1946.

The aggregate number of active cotton spindle hours reported for the month was 8,530,817,633, an average of 358 per spindle in place, compared with 9,103,351,568, an average of 382 per spindle in place for June, 1947, and 8,007,075,150, an average of 336 per spindle in place for July, 1946.

Based on an activity of 80 hours per week, cotton consuming spindles in the United States were operated during July at 101.7 per cent capacity. The percentage on the same activity basis was 113.6 for June, 1947, and 95.3 for July, 1946.

The Census Bureau also reports that 10,035,304 bales of cotton were consumed in the United States in the 12 months ended July 31, an increase of 872,097 bales over the 9,163,107 bales consumed in the corresponding year-ago period. July consumption amounted to 677,489 bales, a drop compared with the 729,603 bales consumed in July, 1946.

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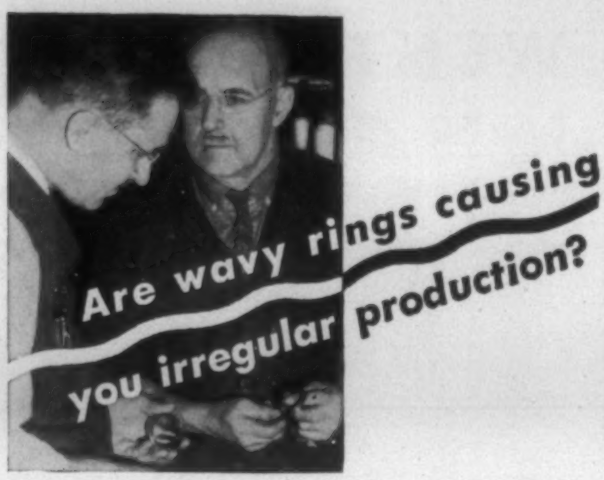

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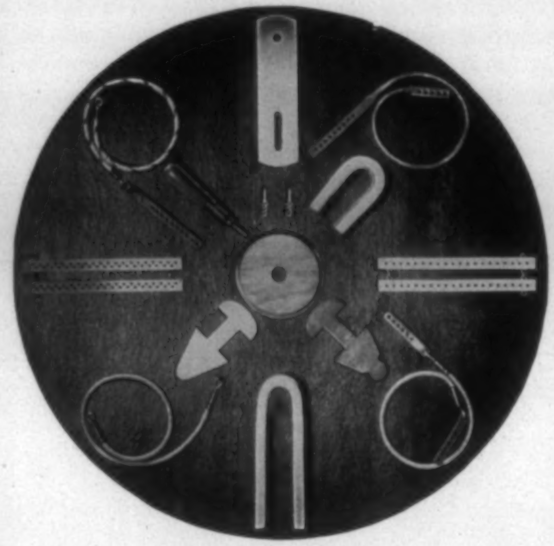

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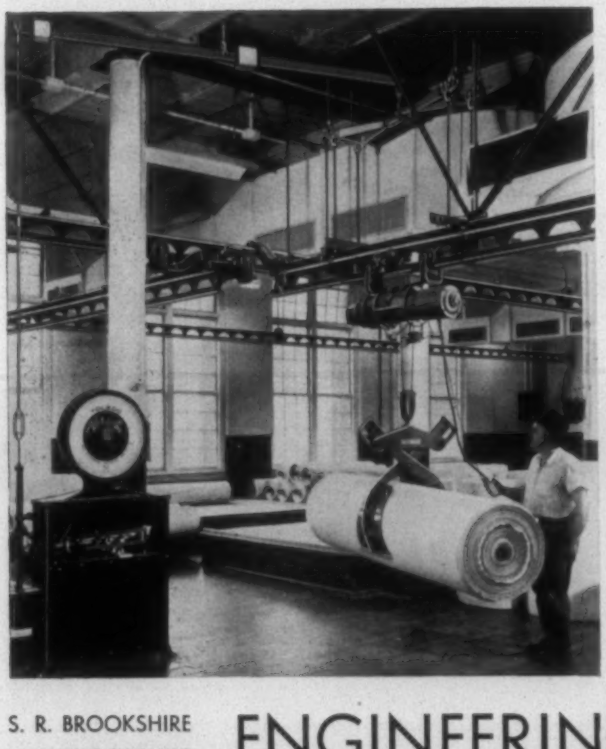

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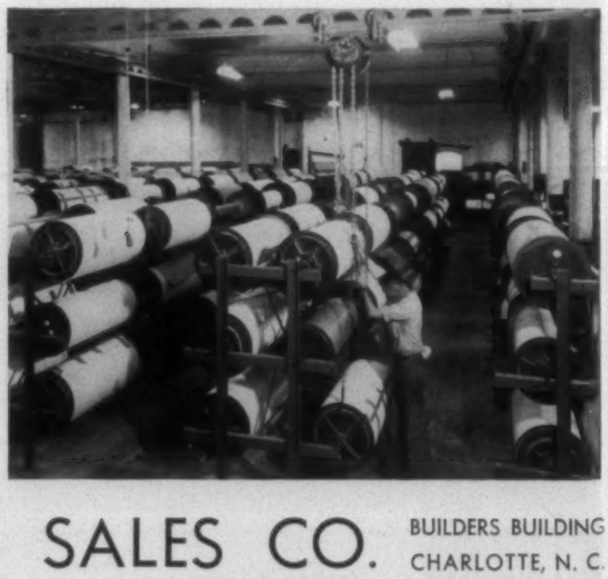

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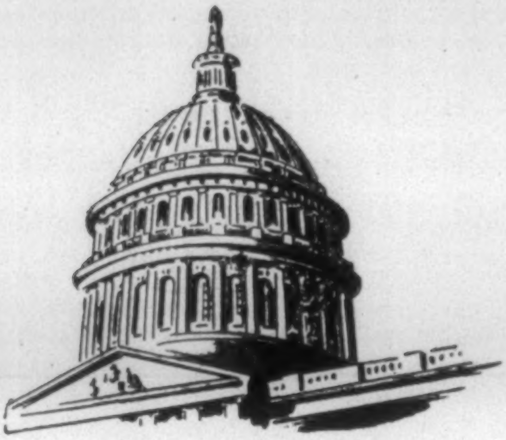

[Exclusive and Timely News from the Nation's Capital]

There's more bluff and bluster than real intent in the defiance union leaders are hurling at the Taft-Hartley Act. With all of the noise and rabble rousing, these leaders are carefully avoiding an overt act that will bring them into conflict with the law, or possibly invite action by the Department of Justice. Rank and file members of unions are beginning to make clear they will not support a boycott of N. L. R. B. and the law and forego their rights under it, especially only to protect communist officers in C. I. O. unions. There's a rising tide of rank-and-file wrath as pending cases are withdrawn from N. L. R. B., where employer discrimination is alleged. The effect is that rank-and-filers who hoped for reinstatement with back pay are left out in the cold, utterly abandoned, with no possible redress whatsoever where the six months' limitation runs against them.

What big union officials have not learned, or seek to ignore, **is that the new law confers distinct rights on the individual worker, of which not even the union or its bosses can deprive him.** The law nails responsibility to unions, and gives union members greater control than they have ever had over union officers and their activities, and over union funds. Under this law the worker cannot be shoved around either by the employer or by his union.

General Counsel Denham moved aggressively in announcing that all officers of unions, international or local, **must sign non-communist affidavits and otherwise comply with the law, within 20 days.** His action caused consternation in both the Green and Murray camps. All C. I. O. and A. F. of L. officials, including Murray and Green, and A. F. of L.'s 15 vice-presidents, including John L. Lewis, must sign, said Denham. Lewis is said to have balked. If he continues his refusal, his action will block N. L. R. B. procedure in all pending cases. Lewis withdrew 15 pending mine worker cases. Time was when he was reputed to rule N. L. R. B. with his little finger.

All A. F. of L. unions in New England have indicated their intention to fully comply with the law. And so have the International Machinists Union and the Ladies Garment Workers. But C. I. O. unions in New England are adhering to the Murray-Pressman boycott. C. I. O. has not found a way in which its members can file petitions as individual complainants and claim protection and benefits of the law.

N. L. R. B. will function in the future strictly as a labor court; non-judicial functions will be performed by Denham, as general counsel. The board cannot act on a case unless Denham brings it up. New rules drafted by Denham preclude unions evading the law through officials seeking to intervene in cases, or filing complaints, merely as individuals. He told the union leaders plainly that such petitions and subterfuges from them as individuals would go straight into the ash can.

N. L. R. B.'s staff, at home and in the field, is transferred to Denham; it's taking up its work under the new law with unexpected zeal. Denham swept out conflicts and duplications in the archaic system of the old board, and vested much final authority in division and regional directors. He suspended all pending cases for 20 days to allow unions to fully comply with the law. Where they fail to do so their pending complaints and petitions for elections will be dismissed.

Stiffest features of the law became effective Aug. 22. For the first time unions became subject to prosecution before N. L. R. B. on one or more of six prescribed unfair labor practices, including coercing employees, refusing to bargain, feather bedding, forcing employers to pay for work not performed, and engaging in jurisdictional strikes and boycotts. The new law protects not only workers who want to organize, but those who don't, and protects rights of employers, too.

Employers can be haled before N. L. R. B. for unfair practices, but a union cannot have such charges certified for hearing unless it has registered, filed its financial statements, and its officers have made non-communist affidavits. Most unions have not yet furnished these documents, and many say they will not do so. They face the eventuality of a new independent union springing up, and being certified as bargaining agent for a plant's workers.

President Truman called in N. L. R. B. members and read a riot act to the effect they were under his jurisdiction, and in nowise responsible to Congress. In doing so he may have jeopardized the possibility of the Senate confirming the new board members, at least unless they proclaim they will not accept his dictation. Government boards are independent agencies, created by and responsible only to Congress, and so decided by the Supreme Court in over-ruling the Roosevelt attempt to fire William Humphrey from the Federal Trade Commission.

The new law says a member of N. L. R. B. may be removed by the President only upon notice and hearing for neglect of duty or malfeasant in office, and for no other cause. Congress went to extreme length to divorce the new board from Presidential dictation, and applied the same treatment to the Federal Mediation Service, which is made independent.

C. I. O. denies it is trying to evade the law through "no suit" provisions in contracts. It says it wants to prevent employers from securing "huge damages" from unions, and its sole aim is to maintain the liability of parties to wage pacts on the same basis or before enactment of the new law. Chairman Hartley says every major attempt to by-pass the law, either by unions alone or in conjunction with employers, will be scrutinized by the House Labor Committee when Congress reassembles.

Mr. Hartley does not believe the new law has enough "teeth" to give real protection against strikes and union abuses, and, at best, it only stalls off a strike for 85 days. He says when Congress meets he will press for enactment of the strike ban of the original Hartley bill. This provision defined as "a monopolistic strike" a walkout resulting from any concerted action of employees of competing concerns not represented by the same union.

The important and difficult task of building up a new mediation service in labor relations falls to Cyrus Ching, industrialist. He's had long experience in rubber industry labor relations, and commands attention and confidence. For the first time mediation agents will have behind them, in addition to a positive law, a leader who believes in the cultivation of good industrial relations, and unquestioned fairness to both sides. He may often obviate invoking the new law's more drastic provisions.

High cost of joining some unions is coming under N. L. R. B. scrutiny, but probably only as formal complaints are taken up. The board is empowered to order reductions where initiation fees are found to be excessive, and it may prescribe new fees in the light of union custom in a particular industry, and wages that are currently paid.

N. L. R. B. will not inquire into "no damage suit" provisions in wage contracts until formally brought up in complaints and hearings. The same procedure will apply to initiation fees, closed shops, check-offs, jurisdictional strikes and boycotts. Scores of contracts with so-called "illegal" provisions can be executed and retained in force if no complaints are filed. A quickie or wildcat strike can suddenly topple over the whole "no suit" structure.

Unions are suddenly showing a sudden desire to abandon all their old grudges and get along agreeably and peaceably with employers if they can get "no suit" and other protective provisions from penalties into wage pacts. The obstacle is that in trying to repeal the law the unions may invite enactment of several provisions of the Hartley bill which the Senate failed to accept.

Wildcat strikes are increasing in the coal industry under the "able and willing to work" clause of the new coal contract. This provision is the Lewis model for avoiding damage and penalty suits. One strike of 150 miners started when a worker refused to carry out a foreman's order, saying he wasn't "willing and able."

Union leaders are suddenly aware they have a large stake in rising production and in employer-employee co-operation in cutting costs. Thirty-three of them in big unions are asking employers to join with them in exploring ways to eliminate inefficiency and increase production. It's the first concerted move of this kind since the war's end.

The unionists are dropping their demands for a guaranteed annual wage and concentrating on holding wage rates they have gained since the war. They are suddenly aware that high wages are possible only with high productive efficiency, and say, too, that such wages are possible only if production is increased to forestall shrinking profits.

Congress has reached the end of patience with the Administration for using labor relations as a political football and instrument of political barter. The matter will come up in the next session if the unions persist in their defiance of the ban against political expenditures and contributions by labor organizations, and an attempt to scatter union funds in campaigns as in the past.

Final big battle of the unions on the law is expected to focus on the closed shop issue. This provision was enacted by Congress in the belief that it gave union leaders a strangling grip on workers, and was the root of the ruthless and autocratic actions of union bosses. About 5,000,000 workers are in closed shops, but to continue them by contract is an "unfair labor practice."

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